```
=> d his nofil

     (FILE 'HOME' ENTERED AT 10:37:56 ON 01 NOV 2006)

     FILE 'HCAPLUS' ENTERED AT 10:38:06 ON 01 NOV 2006
                E US2004-828800/APPS
L1            1 SEA ABB=ON  PLU=ON  US2004-828800/AP
                SEL RN

     FILE 'REGISTRY' ENTERED AT 10:38:21 ON 01 NOV 2006
L2           10 SEA ABB=ON  PLU=ON  (13963-58-1/BI OR 24979-97-3/BI OR
                25190-06-1/BI OR 26471-62-5/BI OR 26764-44-3/BI OR 52625-13-5/B
                I OR 56-81-5/BI OR 71698-13-0/BI OR 75-65-0/BI OR 7646-85-7/BI)


     FILE 'HCAPLUS' ENTERED AT 10:38:24 ON 01 NOV 2006
L3            1 SEA ABB=ON  PLU=ON  L1 AND L2
                D IALL HITSTR
                E POLYETHER POLYOL/CT
                E E4+ALL
                E E2+ALL
L4          959 SEA ABB=ON  PLU=ON  "POLYETHERS (L) HYDROXY-CONTG."+PFT/CT
                E POLYOXYALKYLENES (L) HYDROXY-CONTG.+ALL/CT
L5          162 SEA ABB=ON  PLU=ON  "POLYOXYALKYLENES (L) HYDROXY-CONTG."+PFT/C
                T
                E POLYURETHANES, PREPARATION/CT
                E E3+ALL
L6         8165 SEA ABB=ON  PLU=ON  POLYURETHANES, PREPARATION/CT

     FILE 'REGISTRY' ENTERED AT 11:27:08 ON 01 NOV 2006
                E POLYUR/PCT

     FILE 'HCAPLUS' ENTERED AT 11:27:08 ON 01 NOV 2006

     FILE 'REGISTRY' ENTERED AT 11:27:12 ON 01 NOV 2006
                E POLYUR/PCT
L*** DEL  74063 S E6-7
L7        70593 SEA ABB=ON  PLU=ON  "POLYURETHANE FORMED"/PCT

     FILE 'HCAPLUS' ENTERED AT 11:28:04 ON 01 NOV 2006
L8        21226 SEA ABB=ON  PLU=ON  L7(L)PREP+NT/RL
L9        25000 SEA ABB=ON  PLU=ON  L6 OR L8
                E SYNDIOTACTIC/CT
                E SYNDIOTACTIC TRI/CT
                E TRIAD/CT
L10         295 SEA ABB=ON  PLU=ON  SYNDIOTAC?(S)TRIAD
L*** DEL      1 S L9 AND L10
L*** DEL      1 S L1 AND L11
L11        1678 SEA ABB=ON  PLU=ON  L9 AND L2

     FILE 'REGISTRY' ENTERED AT 11:40:03 ON 01 NOV 2006
L12           0 SEA ABB=ON  PLU=ON  L7 AND L2
L13         793 SEA ABB=ON  PLU=ON  "SYNDIOTACTIC"
                DIS
L14             STR
L15           2 SEA SUB=L13 SSS SAM L14
L16          80 SEA SUB=L13 SSS FUL L14

     FILE 'HCAPLUS' ENTERED AT 11:42:17 ON 01 NOV 2006
L17           1 SEA ABB=ON  PLU=ON  L16 AND L9
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                  D SCA
L18             1 SEA ABB=ON  PLU=ON  L13 AND L9
L19          9012 SEA ABB=ON  PLU=ON  L4 OR L5 OR POLYETHERPOLYOL? OR POLYETHER(2
                  A)(POLYOL OR POLYALCOHOL) OR POLYOXYALKYLENE POLYOL
L20             9 SEA ABB=ON  PLU=ON  L19 AND (SYNDIOTAC? OR TRIAD OR STEREOREG?)

L21          1967 SEA ABB=ON  PLU=ON  L9 AND L19

     FILE 'REGISTRY' ENTERED AT 11:47:41 ON 01 NOV 2006
L*** DEL     8646 S (ZN AND CO)/ELS

     FILE 'HCAPLUS' ENTERED AT 11:47:57 ON 01 NOV 2006
L*** DEL     5999 S L22
L22           424 SEA ABB=ON  PLU=ON  L21 AND CAT/RL

     FILE 'REGISTRY' ENTERED AT 11:49:02 ON 01 NOV 2006
L23        196933 SEA ABB=ON  PLU=ON  ZN/ELS
L24        366881 SEA ABB=ON  PLU=ON  CO/ELS
L25        161837 SEA ABB=ON  PLU=ON  L24 AND NC=1
L26        205044 SEA ABB=ON  PLU=ON  L24 NOT L25

     FILE 'HCAPLUS' ENTERED AT 11:49:36 ON 01 NOV 2006
L27            38 SEA ABB=ON  PLU=ON  L21 AND L23(L)CAT/RL AND (L25 OR L26)(L)CAT
                  /RL
                  E KIM I/AU
L28          2317 SEA ABB=ON  PLU=ON  ("KIM I"/AU OR "KIM I A"/AU OR "KIM I
                  B"/AU OR "KIM I C"/AU OR "KIM I CHEONG"/AU OR "KIM I D"/AU OR
                  "KIM I E"/AU OR "KIM I G"/AU OR "KIM I GON"/AU OR "KIM I
                  GWON"/AU OR "KIM I H"/AU OR "KIM I HO"/AU OR "KIM I HOON"/AU
                  OR "KIM I HUN"/AU OR "KIM I HWA"/AU OR "KIM I I"/AU OR "KIM I
                  J"/AU OR "KIM I JONG"/AU OR "KIM I JUN"/AU OR "KIM I K"/AU OR
                  "KIM I KI HONG"/AU OR "KIM I M"/AU OR "KIM I N"/AU OR "KIM I
                  P"/AU OR "KIM I R"/AU OR "KIM I S"/AU OR "KIM I SEOP"/AU OR
                  "KIM I SU"/AU OR "KIM I SUN"/AU OR "KIM I T"/AU OR "KIM I
                  TAE"/AU OR "KIM I U"/AU OR "KIM I W"/AU OR "KIM I Y"/AU OR
                  "KIM I Y S"/AU OR "KIM I YEOB"/AU OR "KIM I YEONG"/AU OR "KIM
                  I YEOP"/AU OR "KIM I YONG"/AU OR "KIM I YOUNG"/AU OR "KIM I
                  YOUNG EUN"/AU OR "KIM I1 YONG"/AU OR "KIM IL"/AU OR "KIM IL
                  BAE"/AU OR "KIM IL BOK"/AU OR "KIM IL BONG"/AU OR "KIM IL
                  BOO"/AU OR "KIM IL BUNG"/AU OR "KIM IL C"/AU OR "KIM IL
                  CHAN"/AU OR "KIM IL CHEOL"/AU OR "KIM IL CHOL"/AU OR "KIM IL
                  CHOOL"/AU OR "KIM IL CHUL"/AU OR "KIM IL DAE"/AU OR "KIM IL
                  DEOK"/AU OR "KIM IL DO"/AU OR "KIM IL DONG"/AU OR "KIM IL
                  DOO"/AU OR "KIM IL DU"/AU OR "KIM IL GI"/AU OR "KIM IL GON"/AU
                  OR "KIM IL GOO"/AU OR "KIM IL GU"/AU OR "KIM IL GUK"/AU OR
                  "KIM IL GWAN"/AU OR "KIM IL GWANG"/AU OR "KIM IL GWEON"/AU OR
                  "KIM IL GWON"/AU OR "KIM IL GYEONG"/AU OR "KIM IL GYOON"/AU OR
                  "KIM IL GYU"/AU OR "KIM IL HAE"/AU OR "KIM IL HAK"/AU OR "KIM
                  IL HAN"/AU OR "KIM IL HEE"/AU OR "KIM IL HO"/AU OR "KIM IL
                  HONG"/AU OR "KIM IL HOON"/AU OR "KIM IL HWA"/AU OR "KIM IL
                  HWAN"/AU OR "KIM IL HYEOK"/AU OR "KIM IL HYEON"/AU OR "KIM IL
                  HYEONG"/AU OR "KIM IL HYONG"/AU OR "KIM IL HYOUNG"/AU OR "KIM
                  IL HYUK"/AU OR "KIM IL HYUN"/AU OR "KIM IL HYUNG"/AU OR "KIM
                  IL J"/AU OR "KIM IL JAE"/AU OR "KIM IL JANG"/AU OR "KIM IL
                  JIN"/AU OR "KIM IL JO"/AU OR "KIM IL JONG"/AU OR "KIM IL
                  JOO"/AU OR "KIM IL JOONG"/AU OR "KIM IL JU"/AU OR "KIM IL
                  JUNG"/AU OR "KIM IL K"/AU OR "KIM IL KI"/AU OR "KIM IL KON"/AU
                  OR "KIM IL KU"/AU OR "KIM IL KWANG"/AU OR "KIM IL KWEON"/AU OR
                  "KIM IL KWON"/AU OR "KIM IL KWUN"/AU OR "KIM IL
                  E LEE S/AU
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L29           3051 SEA ABB=ON  PLU=ON  ("LEE S"/AU OR "LEE S H"/AU OR "LEE S H
                   D"/AU OR "LEE S H JR"/AU OR "LEE S H K"/AU OR "LEE S H S"/AU
                   OR "LEE S H TONY"/AU OR "LEE S H YI"/AU OR "LEE SANG"/AU OR
                   "LEE SANG H"/AU OR "LEE SANG HYUN"/AU)
                   E AN J/AU
L30             82 SEA ABB=ON  PLU=ON  ("AN J"/AU OR "AN JUN"/AU OR "AN JUN
                   TAE"/AU OR "AN JUN TAI"/AU)
L31             29 SEA ABB=ON  PLU=ON  (L28 AND (L29 OR L30)) OR (L29 AND L30)
L32           5420 SEA ABB=ON  PLU=ON  (L28 OR L29 OR L30)
L33              7 SEA ABB=ON  PLU=ON  L32 AND POLYETHER AND POLYOL
L34              9 SEA ABB=ON  PLU=ON  L32 AND SYNDIOTAC?
L35              7 SEA ABB=ON  PLU=ON  L32 AND TRIAD
L36              6 SEA ABB=ON  PLU=ON  L32 AND STEREOREG?
L37             50 SEA ABB=ON  PLU=ON  L31 OR (L33 OR L34 OR L35 OR L36)
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=> fil hcap
FILE 'HCAPLUS' ENTERED AT 12:09:50 ON 01 NOV 2006
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FILE COVERS 1907 - 1 Nov 2006  VOL 145 ISS 19
FILE LAST UPDATED: 31 Oct 2006  (20061031/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que l20
L4            959 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "POLYETHERS (L) HYDROXY-CONTG.
                "+PFT/CT
L5            162 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "POLYOXYALKYLENES (L)
                HYDROXY-CONTG."+PFT/CT
L19          9012 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 OR L5 OR POLYETHERPOLYOL?
                OR POLYETHER(2A)(POLYOL OR POLYALCOHOL) OR POLYOXYALKYLENE
                POLYOL
L20             9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 AND (SYNDIOTAC? OR TRIAD
                OR STEREOREG?)


=> d que l27
L4            959 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "POLYETHERS (L) HYDROXY-CONTG.
                "+PFT/CT
L5            162 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "POLYOXYALKYLENES (L)
                HYDROXY-CONTG."+PFT/CT
L6           8165 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POLYURETHANES, PREPARATION/CT

L7          70593 SEA FILE=REGISTRY ABB=ON  PLU=ON  "POLYURETHANE FORMED"/PCT
L8          21226 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7(L)PREP+NT/RL
L9          25000 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR L8
L19          9012 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 OR L5 OR POLYETHERPOLYOL?
                OR POLYETHER(2A)(POLYOL OR POLYALCOHOL) OR POLYOXYALKYLENE
                POLYOL
L21          1967 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L9 AND L19
L23        196933 SEA FILE=REGISTRY ABB=ON  PLU=ON  ZN/ELS
L24        366881 SEA FILE=REGISTRY ABB=ON  PLU=ON  CO/ELS
L25        161837 SEA FILE=REGISTRY ABB=ON  PLU=ON  L24 AND NC=1
L26        205044 SEA FILE=REGISTRY ABB=ON  PLU=ON  L24 NOT L25
L27            38 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 AND L23(L)CAT/RL AND (L25
                OR L26)(L)CAT/RL


=> s l20 or l27
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L38          44 L20 OR L27

=> d l38 ibib abs hitind hitstr 1-38

L38  ANSWER 1 OF 44  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:899498  HCAPLUS  Full-text
TITLE:                    Study on the structure of low unsaturated
                          polyether polyols
AUTHOR(S):                Yang, Dong-mei; Fan, Zhong-yong; Tu, Jian-jun; Shi,
                          Zheng-jin; Wang, Wei; Yu, Yin
CORPORATE SOURCE:         Department of Materials Science, Fudan University,
                          Shanghai, 200433, Peop. Rep. China
SOURCE:                   Fudan Xuebao, Ziran Kexueban (2006), 45(3), 380-384
                          CODEN: FHPTAY; ISSN: 0427-7104
PUBLISHER:                Fudan Daxue Chubanshe
DOCUMENT TYPE:            Journal
LANGUAGE:                 Chinese
AB    The structures of propylene oxide-ethylene oxide copolymers, and polypropylene
      were investigated by FTIR, 1H NMR, 13C NMR, MALDI-TOF-MS, and GPC.  Two weak
      characteristic absorption peaks of polyoxopropyl were observed at 1 374 and 1
      010 cm-1 by FTIR.  The compns., mol. mass wts. and the mol. weight
      distributions of the polymers were confirmed by MALDI-TOF-MS. The contents of
      the initiators and EO were calculated by using 1H NMR, and the sequence
      distributions of various the diads and triads units were established by 13C
      NMR.
CC    35 (Chemistry of Synthetic High Polymers)

L38  ANSWER 2 OF 44  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:381288  HCAPLUS  Full-text
DOCUMENT NUMBER:          144:434598
TITLE:                    Polyurethane resins and process for producing
                          polyurethane resin solutions
INVENTOR(S):              Tsuge, Yukio; Ohori, Tomeyoshi; Wada, Hiroshi
PATENT ASSIGNEE(S):       Asahi Glass Company, Limited, Japan
SOURCE:                   PCT Int. Appl., 31 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE       APPLICATION NO.       DATE
     ---------------     ----   --------   --------------------  --------
     WO 2006043569        A1    20060427   WO 2005-JP19146       20051018
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
             NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
             SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
             YU, ZA, ZM, ZW
        RW:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                     JP 2004-306840      A  20041021
                                           JP 2005-211499      A  20050721
AB    Polyurethane resins having a low stretch modulus, a low modulus at low temps.,
      and excellent elastic recovery are prepared by a process including reacting a
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polyisocyanate compound with a ***polyether polyol*** having number-average mol. weight 750-4,000 obtained by causing a polyoxytetramethylene diol or polycarbonate diol having number-average mol. weight 500-2,500 to add alkylene oxides using a composite metal cyanide complex catalyst as an initiator to obtain an isocyanate-terminated prepolymers and reacting the prepolymers with a chain extender and/or hardener in an organic solvent. Thus, a polyether urethane rubber was prepared from PTMG-propylene oxide copolymer, MDI, and ethylenediamine-Et2NH in a solvent.

CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38, 39, 40

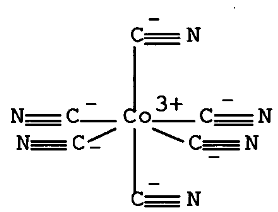
IT 75-65-0D, tert-Butyl alcohol, complexes with ethylene glycol mono-tert-Bu ether and zinc hexacyanocobaltate 7580-85-0D, Ethylene glycol mono-tert-butyl ether, complexes with tert-Bu alc. and zinc hexacyanocobaltate ***14049-79-7D,*** Zinc hexacyanocobaltate, complexes with ethylene glycol mono-tert-Bu ether and tert-Bu alc.
RL: ***CAT (Catalyst use);*** USES (Uses)
(polyurethane resins from polyether and polycarbonate diols and polyisocyanates and chain extenders)

IT 101-68-8DP, MDI, polymers with butanediol and polycarbonate diols 110-63-4DP, 1,4-Butanediol, polymers with MDI and polycarbonate diols ***135422-28-5P,*** Isophoronediamine-isophorone diisocyanate-polytetramethylene glycol-propylene oxide copolymer ***884490-29-3DP*** , reaction products with diethylamine ***884490-30-6P,*** Ethylenediamine-ethylene oxide-MDI-polytetramethylene glycol-propylene oxide copolymer
RL: ***IMF (Industrial manufacture);*** PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation);*** USES (Uses)
(polyurethane resins from polyether and polycarbonate diols and polyisocyanates and chain extenders)

IT ***14049-79-7D,*** Zinc hexacyanocobaltate, complexes with ethylene glycol mono-tert-Bu ether and tert-Bu alc.
RL: ***CAT (Catalyst use);*** USES (Uses)
(polyurethane resins from polyether and polycarbonate diols and polyisocyanates and chain extenders)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



IT ***135422-28-5P,*** Isophoronediamine-isophorone diisocyanate-polytetramethylene glycol-propylene oxide copolymer ***884490-29-3DP*** , reaction products with diethylamine ***884490-30-6P,*** Ethylenediamine-ethylene oxide-MDI-polytetramethylene glycol-propylene oxide copolymer

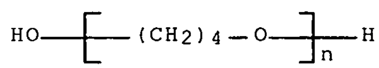
RL: ***IMF (Industrial manufacture)***; PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(polyurethane resins from polyether and polycarbonate diols and polyisocyanates and chain extenders)

RN 135422-28-5 HCAPLUS

CN Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, polymer with α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and methyloxirane (9CI) (CA INDEX NAME)

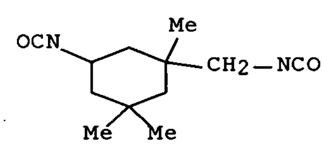
CM 1

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



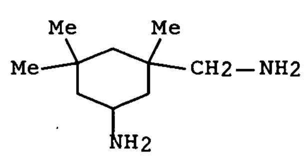
CM 2

CRN 4098-71-9
CMF C12 H18 N2 O2



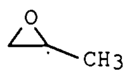
CM 3

CRN 2855-13-2
CMF C10 H22 N2



CM 4

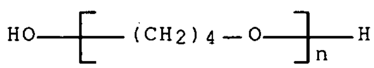
CRN 75-56-9
CMF C3 H6 O



RN 884490-29-3 HCAPLUS
CN 1,2-Ethanediamine, polymer with α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), 1,1'-methylenebis[4-isocyanatobenzene] and methyloxirane (9CI) (CA INDEX NAME)

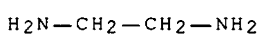
CM 1

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



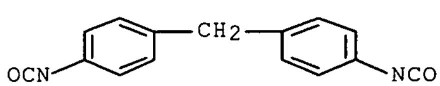
CM 2

CRN 107-15-3
CMF C2 H8 N2



CM 3

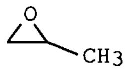
CRN 101-68-8
CMF C15 H10 N2 O2



CM 4

CRN 75-56-9

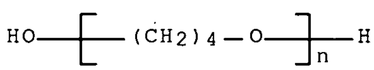
CMF C3 H6 O



RN 884490-30-6 HCAPLUS
CN 1,2-Ethanediamine, polymer with α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane and oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



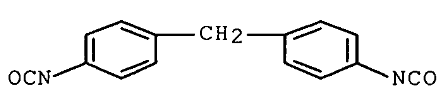
CM 2

CRN 107-15-3
CMF C2 H8 N2

$H_2N—CH_2—CH_2—NH_2$

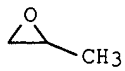
CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



CM 4

CRN 75-56-9
CMF C3 H6 O



CM 5

CRN 75-21-8
CMF C2 H4 O

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1042310 HCAPLUS Full-text
DOCUMENT NUMBER: 143:326802
TITLE: Production of polyether alcohols by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants
INVENTOR(S): Ruppel, Raimund; Baum, Eva; Ostrowski, Thomas; Harre, Kathrin; Bleuel, Elke
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090440	A1	20050929	WO 2005-EP2848	20050317

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 102004013408	A1	20051006	DE 2004-102004013408	20040318

PRIORITY APPLN. INFO.: DE 2004-102004013408A 20040318

AB A method for production of polyether alcs. by reacting alkylene oxides with at least one saturated OH-containing compound, which has been optionally already

reacted with an alkylene oxide, in the presence of a double metal cyanide (DMC) catalyst and an antioxidizing agent added before or during the reaction is described. Thus, 3200 g of glycerol propoxylate·with average mol. weight of 1000 were mixed in reactor with 11 g of 5.53 % solution of zinc hexacyanocobaltate (double metal cyanide catalyst) and heated to 120° under vacuum so the mixture water content became < 0.02 % ; 10 g of 2,6-di-tert-butyl-4-methylphenol (antioxidant) were added, followed by 400 g of propylene oxide bubbled through reaction mixture till pressure drop was observed(reaction start was marked 3 min after addition of ani oxidant), after that 16450 g of mixture comprising 14910 g of propylene oxide and 1940 g of ethylene oxide were reacted during 2.5 h. period. The obtained ***polyether polyol*** had hydroxyl number of 48.2 mg KOH/mg, acidic number of 0.027 mg KOH/g, water content of 0.009%, viscosity (25°) of 543 mPas, d. of 1.101 and mol. weight of 3844. The ***polyether polyols*** can be used for producing polyurethanes by reaction with isocyanates or polyisocyanates.

IC ICM C08G065-26

CC 35-7 (Chemistry of Synthetic High Polymers)

ST ring opening polymn ***polyether polyol*** polyurethane prodn; double metal cyanide catalyst antioxidant controlled polyoxyalkylene prepn

IT Hydroxylamines
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)
(N,N-disubstituted, antioxidants; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)

IT Lactones
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)
(antioxidants; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(block, diblock, ethers with glycerol; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)

IT Amines, uses
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)
(cyclic, sterically hindered, secondary, antioxidants; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)

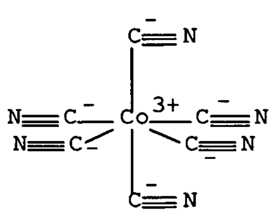
IT Amines, uses
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)
(diamines, aromatic, antioxidants; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)

IT Phenols, uses
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)
(hindered, antioxidants; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)

IT Antioxidants
(***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)

IT Polyoxyalkylenes, preparation
Polyurethanes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and

antioxidants)
IT Polymerization catalysts
(ring-opening, double metal cyanide; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)
IT Polymerization
(ring-opening; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)
IT 59-02-9, α-Tocopherol 101-02-0, Triphenyl phosphite 128-37-0, 2,6-Di-tert-butyl-4-methylphenol, uses 271-89-6, Benzofuran 302-01-2D, Hydrazine, N,N-disubstituted derivs. 471-46-5D, Oxalamide, derivs. 620-81-5 13598-36-2D, Phosphonic acid, derivs. 119588-88-4, N,N-Dihexadecylhydroxylamine
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)
(antioxidant; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)
IT 750646-75-4P
RL: IMF (Industrial manufacture); PREP (Preparation)
(of PO-b-(PO-EO) structure; ***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)
IT 420-05-3D, Cyanic acid, mixed metal salts ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)
IT 25322-69-4P, Poly(propylene oxide)
RL: IMF (Industrial manufacture); PREP (Preparation)
(***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)
IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(***polyether polyols*** produced by ring-opening polymerization of alkylene oxides in presence of double metal cyanides and antioxidants)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



3/2 Zn^{2+}

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1020462 HCAPLUS Full-text
DOCUMENT NUMBER: 143:287188
TITLE: Starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***
INVENTOR(S): Browne, Edward P.
PATENT ASSIGNEE(S): Bayer Materialscience LLC, USA
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 1577334	A1	20050921	EP 2005-5699		20050316
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU					
US 2005209438	A1	20050922	US 2004-804894		20040319
CA 2500905	AA	20050919	CA 2005-2500905		20050315
SG 115771	A1	20051028	SG 2005-1617		20050317
BR 2005000969	A	20051108	BR 2005-969		20050317
JP 2005272838	A2	20051006	JP 2005-78816		20050318
KR 2006044413	A	20060516	KR 2005-22718		20050318
CN 1670007	A	20050921	CN 2005-10056003		20050321
PRIORITY APPLN. INFO.:			US 2004-804894	A	20040319

AB The process of the present invention provides for the manufacture of lower mol. weight double metal cyanide (DMC)-catalyzed polyols than is possible using non-acidified continuous addition of starter (CAOS) feeds, by adding excess acid to a starter feed stream over that required for mere neutralization of the basicity of the starter. The benefits of the invention also extend to starters which do not contain basicity. ***Polyether polyols*** made by the inventive process may be used to produce improved polyurethane products such as coatings, adhesives, sealants, elastomers, foams and the like.

IC ICM C08G065-26
ICS B01J027-26
CC 37-3 (Plastics Manufacture and Processing)
ST double metal cyanide catalyst polyoxyalkylene ***polyether polyol***
IT Acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(inorg., protic; starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)
IT Acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(organic; starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)
IT Polymerization
(ring-opening; starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)
IT Adhesives
Coating materials

Sealing compositions
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT Polyethers, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT Urethane rubber, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT Carboxylic acids, uses
Sulfonic acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT Plastic foams
RL: TEM (Technical or engineered material use); USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

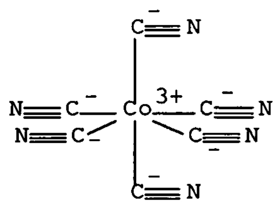
IT 25322-69-4P, Polypropylene glycol 25791-96-2P, Propoxylated glycerin
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 75-44-5, Carbonylchloride 77-92-9, Citric acid, uses 104-15-4, p-Toluenesulfonic acid, uses 108-30-5, Succinic anhydride, uses 108-31-6, Maleic anhydride, uses 110-15-6, Succinic acid, uses 110-16-7, Maleic acid, uses 111-50-2, Adipoylchloride 124-04-9, Adipic acid, uses 144-62-7, Oxalicacid, uses 554-95-0, 1,3,5-Benzenetricarboxylic acid 1314-56-3, Phosphorus pentoxide, uses 2035-75-8, Adipic anhydride 7446-11-9, Sulfur trioxide, uses 7647-01-0, Hydrochloric acid, uses 7664-93-9, Sulfuric acid, uses 7719-09-7, Thionyl chloride 7719-12-2, Phosphorous trichloride 10025-87-3, Phosphoric trichloride 10035-10-6, Hydrobromic acid, uses 13598-36-2, Phosphonic acid
RL: NUU (Other use, unclassified); USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(starter feed stream acidification in double metal cyanide-catalyzed process for the production of ***polyether polyols***)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:698405 HCAPLUS Full-text
DOCUMENT NUMBER: 143:154244
TITLE: ***Polyether polyol*** having ***stereoregularity*** and method of preparing the same
INVENTOR(S): Kim, Il; Lee, Sang Hyun; An, Jun Tai
PATENT ASSIGNEE(S): SKC Inc., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2005171319	A1	20050804	US 2004-828800		20040422
KR 2005078969	A	20050808	KR 2004-7102		20040203

PRIORITY APPLN. INFO.: KR 2004-7102 A 20040203

AB Disclosed is ***polyether polyol*** for use in production of polyurethane, characterized in that ***polyether polyol*** carbons have ***stereoregularity*** of ***syndiotactic triad***. Further, a method of preparing such ***polyether polyol*** is provided wherein an epoxy compound is polymerized in the presence of a double metal cyanide catalyst prepared by reaction of ZnCl2, tert-BuOH, K hexacyanocobaltate, and polytetrahydrofuran. Therefore, polyurethane resulting from ***stereoregular polyether polyol*** is superior in phys. properties to polyurethanes obtained by use of atactic ***polyether polyols***.

IC ICM C08G018-30
INCL 528076000
CC 37-3 (Plastics Manufacture and Processing)
ST ***stereoregular polyoxyalkylene polyol*** manuf
zinc cobalt complex catalyst; tertiary butanol polytetrahydrofuran complex catalyst ***stereoregular polyoxyalkylene polyol*** manuf; polyurethane ***stereoregular polyoxyalkylene polyol*** precursor manuf
IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

(polyoxyalkylene-polyurea-; manufactured of ***polyoxyalkylene polyols*** having ***stereoregularity*** in presence of double metal cyanide catalysts for polyurethanes with improved mech. properties)

IT Polyureas
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(polyoxyalkylene-polyurethane-; manufactured of ***polyoxyalkylene polyols*** having ***stereoregularity*** in presence of double metal cyanide catalysts for polyurethanes with improved mech. properties)

IT Polymerization catalysts
(ring-opening; manufactured of ***polyoxyalkylene polyols*** having ***stereoregularity*** in presence of double metal cyanide catalysts for polyurethanes with improved mech. properties)

IT 75-65-0, tert-Butanol, uses ***7646-85-7***, Zinc chloride, uses ***13963-58-1***, Potassium hexacyanocobaltate 24979-97-3, Polytetrahydrofuran 25190-06-1, Polytetrahydrofuran, sru
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalyst component; manufactured of ***polyoxyalkylene polyols*** having ***stereoregularity*** in presence of double metal cyanide catalysts for polyurethanes with improved mech. properties)

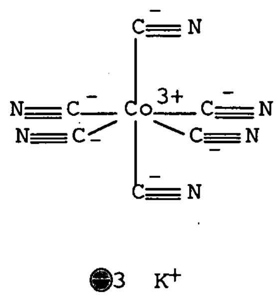
IT 56-81-5DP, Glycerol, polyethers with ***syndiotactic*** polypropylene oxide, polyurethanes 26471-62-5DP, TDI-80, polyoxyalkylene-polyurea-polyurethanes with ***syndiotactic*** polypropylene glycol 26764-44-3DP, polyoxyalkylene-polyurea-polyurethanes with ***syndiotactic*** polypropylene glycol 52625-13-5DP, Polypropylene glycol sorbitol ether, reaction products with ***syndiotactic*** polypropylene oxide, polyurethanes 71698-13-0DP, ***Syndiotactic*** polypropylene glycol, reaction products with polyols, polyurethanes
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(manufactured of ***polyoxyalkylene polyols*** having ***stereoregularity*** in presence of double metal cyanide catalysts for polyurethanes with improved mech. properties)

IT ***7646-85-7***, Zinc chloride, uses ***13963-58-1***, Potassium hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalyst component; manufactured of ***polyoxyalkylene polyols*** having ***stereoregularity*** in presence of double metal cyanide catalysts for polyurethanes with improved mech. properties)

RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

RN 13963-58-1 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, tripotassium, (OC-6-11)- (9CI) (CA INDEX NAME)



L38 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2005:436151 HCAPLUS Full-text
DOCUMENT NUMBER:	143:8519
TITLE:	Method for preparing polyether-based polyurethane microporous elastomer
INVENTOR(S):	Kang, Maoqing; Wang, Xinkui; Yin, Ning; Feng, Yuelan; Zhang, Qingyun; Qu, Bo
PATENT ASSIGNEE(S):	Shanxi Institute of Coal Chemistry, Chinese Academy of Sciences, Peop. Rep. China
SOURCE:	Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp. CODEN: CNXXEV
DOCUMENT TYPE:	Patent
LANGUAGE:	Chinese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CN 1428359	A	20030709	CN 2001-131677	20011227
PRIORITY APPLN. INFO.:				CN 2001-131677	20011227

AB The method comprises reacting diisocyanate with low-unsatn. ***polyether polyol*** and low mol. reactive compound at 80-90° for 2-3 h to obtain isocyanate-terminated semi-prepolymer; mixing low-unsatn. ***polyether polyol*** with chain extending agent, water, catalyst, and surfactant (at a ratio of 100:5-15:0.3-1.2:1.0-2.0:0.3-1.0) at 40-50° for 1-2 h, deaerating to obtain polyol mixture; mixing the isocyanate-terminated semi-prepolymer with the polyol mixture at 40-50° under controlling the isocyanate index at 90-100, casting, foaming, and demolding. The diisocyanate is 2,2'-diphenylmethane diisocyanate, 2,4'-diphenylmethane diisocyanate, 4,4'-diphenylmethane diisocyanate, or carbodiimide modified diisocyanate. The ***polyether polyol*** with functionality of 2.0 and/or 3.0 and unsatn. degree <0.01 meq·g-1 is ***polyoxyalkylene polyol***. The chain extending agent is ethylene glycol, propanediol, butanediol, pentanediol, diglycol, and/or dipropylene glycol. The catalyst is triethylenediamine, tetramethyldiethylenediamine, dibutyltin dilaurate, etc. The surfactant is organosilicon or polyoxyalkylene copolymer.

IC ICM C08G018-48

CC 37-3 (Plastics Manufacture and Processing)

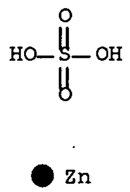
IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(polyether-; method for preparing polyether-based polyurethane microporous elastomer)

IT ***7733-02-0***, Zinc sulfate ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)

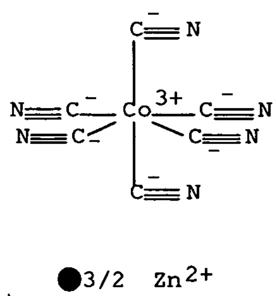
(zinc hexacyanocobaltate/zinc sulfate catalyst for preparing polyether-based polyurethane microporous elastomer)

IT ***7733-02-0***, Zinc sulfate ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(zinc hexacyanocobaltate/zinc sulfate catalyst for preparing polyether-based polyurethane microporous elastomer)

RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



L38 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:322389 HCAPLUS Full-text
DOCUMENT NUMBER: 142:374331
TITLE: Stereo- and regio-selective polymerization of racemic epoxides to ***polyether polyols***
INVENTOR(S): Schnorpfeil, Christoph; Rotermund, Udo; Mueller-Hagen, Gerd; Ruppel, Raimund; Fuhrmann, Hans; Oehme, Guenther
PATENT ASSIGNEE(S): BASF AG, Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10342979	A1	20050414	DE 2003-10342979	20030917

PRIORITY APPLN. INFO.: DE 2003-10342979 20030917

AB In the title process, which gives high proportions of isotactic ***triads*** and low contents of stereo-irregular segments, polymerization is carried out in the presence of bimetallic μ-oxoalkoxide-activated polyols and tertiary amines. Heating 1.27 g Mg.HPO4.3H2O, 1.49 g Al(OPr-iso)3, and 13.44 g polyethylene glycol (mol. weight 200) at 250° for 10 min with distillation of iso-PrOH and H2O, cooling, adding 11.6 g propylene oxide, and heating at 130° for 2 h gave a product with number-average mol. weight 850 containing 53% isotactic ***triads*** and 16% regio-inverse segments.

IC ICM C08G065-12
ICS C08G018-48

CC 35-5 (Chemistry of Synthetic High Polymers)

IT Epoxides
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(stereo- and regio-selective polymerization of racemic epoxides to ***polyether polyols***)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(stereo- and regio-selective polymerization of racemic epoxides to ***polyether polyols***)

IT 25322-69-4P, Polypropylene glycol
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(stereo- and regio-selective polymerization of racemic epoxides to ***polyether polyols***)

L38 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:160067 HCAPLUS Full-text
DOCUMENT NUMBER: 142:241768
TITLE: Manufacture of polyurethane foams having low content of formaldehyde and acetaldehyde
INVENTOR(S): Suzuki, Chitoshi; Fukuda, Hiroki; Ikai, Shigeru
PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005048174	A2	20050224	JP 2004-207320	20040714

PRIORITY APPLN. INFO.: JP 2003-274724 A 20030715

AB The foams are manufactured by treatment of ***polyether polyols*** with polyisocyanates in the presence of blowing agents, where total content of HCHO and MeCHO is suppressed to ≤8 ppm in the ***polyether polyols***. Thus, propylene oxide was polymerized in the presence of polypropylene glycol glycerin ether and a reaction product of ZnCl2 with K3Co(CN)6, further polymerized with ethylene oxide in the presence of KOH, and purified to give propylene oxide-ethylene oxide block copolymer polyol showing total content of HCHO and MeCHO 0.95 ppm. A mixture containing the copolymer polyol, Coronate 1021 (polyisocyanate), TDI 80 (80:20 2,4-TDI-2,6-TDI mixture), polymethylene polyphenyl diisocyanate, and water was expanded to give a foam showing total content of HCHO and MeCHO 0.0007 μg/cm3.

IC ICM C08G018-48
ICS C08G065-10; C08G101-00

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35

IT **844885-39-8P,** Coronate 1021-ethylene oxide-propylene oxide diblock copolymer glycerin ether-polymethylenepolyphenylene diisocyanate-TDI 80 copolymer
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(manufacture of polyurethane foams having low content of formaldehyde and acetaldehyde)

IT **7646-85-7,** Zinc chloride, uses **13963-58-1,** Potassium hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(precursor for double metal cyanide ring-opening polymerization catalyst; manufacture of polyurethane foams having low content of formaldehyde and acetaldehyde)

IT **844885-39-8P,** Coronate 1021-ethylene oxide-propylene oxide diblock copolymer glycerin ether-polymethylenepolyphenylene diisocyanate-TDI 80 copolymer
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(manufacture of polyurethane foams having low content of formaldehyde and acetaldehyde)

RN 844885-39-8 HCAPLUS
CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with Coronate 1021, 1,3-diisocyanatomethylbenzene and methyloxirane diblock polymer with oxirane ether with 1,2,3-propanetriol (3:1) (9CI) (CA INDEX NAME)

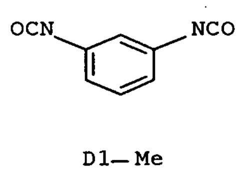
CM 1

CRN 119314-17-9
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



CM 3

CRN 9016-87-9
CMF Unspecified
CCI PMS, MAN

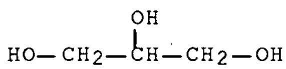
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 750646-75-4
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 5

CRN 56-81-5
CMF C3 H8 O3

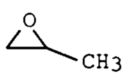


CM 6

CRN 697765-47-2
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 7

CRN 75-56-9
CMF C3 H6 O



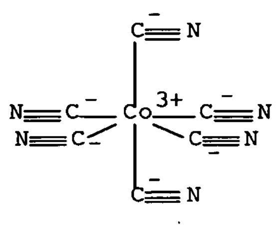
CM 8

CRN 75-21-8
CMF C2 H4 O

IT ***7646-85-7,*** Zinc chloride, uses ***13963-58-1,*** Potassium hexacyanocobaltate
RL: ***CAT (Catalyst use);*** USES (Uses)
(precursor for double metal cyanide ring-opening polymerization catalyst; manufacture of polyurethane foams having low content of formaldehyde and acetaldehyde)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

RN 13963-58-1 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, tripotassium, (OC-6-11)- (9CI) (CA INDEX NAME)



●3 K^+

L38 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:132377 HCAPLUS Full-text
DOCUMENT NUMBER: 142:220160
TITLE: Phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same
INVENTOR(S): Geiger, Eric J.; Hillshaffer, Douglas K.
PATENT ASSIGNEE(S): Stepan Company, USA
SOURCE: U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 427,050. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6855844	B1	20050215	US 2000-696675	20001025
US 6569352	B1	20030527	US 1999-427050	19991025
AT 327267	E	20060615	AT 2000-973712	20001019
WO 2002036656	A2	20020510	WO 2001-US51066	20011019
WO 2002036656	A3	20021227		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002037746	A5	20020515	AU 2002-37746	20011019
US 2005085658	A1	20050421	US 2004-675	20041130
WO 2006060273	A2	20060608	WO 2005-US42680	20051122

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

US 2006135637 A1 20060622 US 2005-286575 20051122

PRIORITY APPLN. INFO.: US 1999-427050 A2 19991025
US 2000-696675 A1 20001025
WO 2001-US51066 W 20011019
US 2004-675 A 20041130

AB Disclosed are polyester-ether polyols and their use in urethane prepolymers, urethane foams and non-foam urethane coatings, adhesives, sealants and/or elastomers (CASE). Methods for producing such polyester-ether polyols using double metal cyanide catalysts are disclosed, along with methods for producing urethane prepolymers. The polyester-ether polyols of the instant invention are preferably the reaction product of phthalic anhydride, diethylene glycol, and propylene oxide. These polyester-ether polyols are useful as either the primary polyol in urethane compns. or in combination with conventional auxiliary polyester- and/or ***polyether***-based ***polyols***. The polyester-ether polyols impart greatly improved solubility and compatibility to mixts. of either polyether and/or polyester polyols. The polyester-ether polyols are desirably of lower viscosity than their precursor intermediate polyester polyols and are generally soluble in either polyester- and/or ***polyether***-based ***polyols***. Addnl., the polyester-ether polyols generally provide improved hydrolytic stability to CASE materials in which they are utilized.

IC ICM C07C041-03
ICS C07C043-10; C07C043-13

INCL 560076000; 252182270; 252182280; 560079000; 560089000; 560091000; 560096000; 560190000; 560198000; 560200000

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 39

ST polyester ether polyol phthalic anhydride based manuf; coating adhesive sealants urethane prepolymer polyester ether polyol; elastomer adhesive sealant urethane prepolymer polyester ether polyol; double metal cyanide catalyst polyester ***polyether polyol***

IT ***Polyurethanes, preparation***
Urethane rubber, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyoxyalkylene-; phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same)

IT Polyesters, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(***polyoxyalkylene-, polyols;*** phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same)

IT ***335630-16-5P,*** Diethylene glycol-1,4-butanediol-phthalic anhydride-propylene oxide-MDI block copolymer
RL: ***IMF (Industrial manufacture);*** PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation);*** USES (Uses)
(comprised of actual and assumed monomers, rubber; phthalic anhydride

based polyester-ether polyols and double metal cyanide catalyst system for preparing same)

IT ***335630-15-4P,*** Diethylene glycol-phthalic anhydride-propylene oxide-MDI block copolymer
RL: ***IMF (Industrial manufacture);*** PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation);*** USES (Uses)
(comprised of actual and assumed monomers; phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same)

IT ***11121-01-0***
RL: ***CAT (Catalyst use);*** USES (Uses)
(phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same)

IT ***335630-16-5P,*** Diethylene glycol-1,4-butanediol-phthalic anhydride-propylene oxide-MDI block copolymer
RL: ***IMF (Industrial manufacture);*** PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation);*** USES (Uses)
(comprised of actual and assumed monomers, rubber; phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same)

RN 335630-16-5 HCAPLUS

CN 1,3-Isobenzofurandione, polymer with 1,4-butanediol, 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane and 2,2'-oxybis[ethanol], block (9CI) (CA INDEX NAME)

CM 1

CRN 111-46-6
CMF C4 H10 O3

HO—CH_2—CH_2—O—CH_2—CH_2—OH

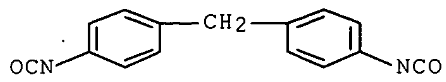
CM 2

CRN 110-63-4
CMF C4 H10 O2

HO—$(CH_2)_4$—OH

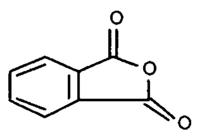
CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



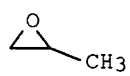
CM 4

CRN 85-44-9
CMF C8 H4 O3



CM 5

CRN 75-56-9
CMF C3 H6 O



IT ***335630-15-4P,*** Diethylene glycol-phthalic anhydride-propylene oxide-MDI block copolymer
RL: ***IMF (Industrial manufacture)***; PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(comprised of actual and assumed monomers; phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same)
RN 335630-15-4 HCAPLUS
CN 1,3-Isobenzofurandione, polymer with 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane and 2,2'-oxybis[ethanol], block (9CI) (CA INDEX NAME)

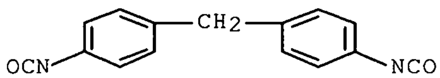
CM 1

CRN 111-46-6
CMF C4 H10 O3

HO—CH2—CH2—O—CH2—CH2—OH

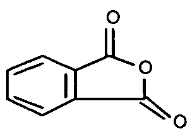
CM 2

CRN 101-68-8
CMF C15 H10 N2 O2



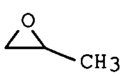
CM 3

CRN 85-44-9
CMF C8 H4 O3



CM 4

CRN 75-56-9
CMF C3 H6 O

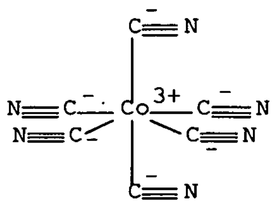


IT ***11121-01-0***
RL: ***CAT (Catalyst use);*** USES (Uses)
(phthalic anhydride based polyester-ether polyols and double metal cyanide catalyst system for preparing same)
RN 11121-01-0 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, (OC-6-11)-, zinc, compd. with 1,2-dimethoxyethane and zinc chloride (ZnCl2) (2:3:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 14049-79-7
CMF C6 Co N6 . 3/2 Zn

CCI CCS



●3/2 Zn^{2+}

CM 2

CRN 7646-85-7
CMF Cl2 Zn

Cl—Zn—Cl

CM 3

CRN 110-71-4
CMF C4 H10 O2

MeO—CH_2—CH_2—OMe

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1080961 HCAPLUS Full-text
DOCUMENT NUMBER: 142:56832
TITLE: Composite metal cyanide complex catalyst, process for producing the same,and use of the same
INVENTOR(S): Suzuki, Chitoshi; Fukuda, Hiroki; Toyota, Yoshinori; Ikai, Shigeru; Sakurai, Hideo
PATENT ASSIGNEE(S): Asahi Glass Company, Limited, Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2004108794	A1	20041216	WO 2004-JP8070		20040603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 2005015786	A2	20050120	JP 2004-164791		20040602
EP 1632517	A1	20060308	EP 2004-735978		20040603
R: BE, DE, FR, GB, IT, NL					
CN 1802400	A	20060712	CN 2004-80015645		20040603
US 2006004233	A1	20060105	US 2005-211453		20050826
PRIORITY APPLN. INFO.:			JP 2003-159341	A	20030604
			WO 2004-JP8070	W	20040603

AB A composite metal cyanide complex catalyst which can be industrially produced with ease and is highly active. It is a finely particulate, composite metal cyanide complex catalyst which contains, as an organic ligand, either t-Bu alc. or a combination of t-Bu alc. with other organic compound When analyzed by the light scattering method for examining fine particles having a particle diameter of 0.15 μm or larger, the finely particulate catalyst has a volume-average particle diameter of 3 to 20 μm. Furthermore, the content of catalyst particles having a particle diameter of 0.15 to 1 μm therein is less than 5 volume% and the content of catalyst particles having a particle diameter exceeding 1 μm therein is 95 to 100 volume%, excluding 95 volume%.

IC ICM C08G065-10
ICS C08K005-56; C08L071-02; B01J031-22

CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38

ST ring opening polymn catalyst polyether cyanide; filter microparticle DMC tert butyl alc catalyst; ***polyether*** monool ***polyol*** dispersion medium

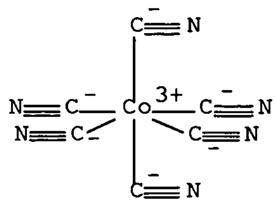
IT Plastic foams
Polyurethanes, preparation
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(composite metal cyanide complex catalyst, process for producing the same,and use of same)

IT 75-65-0DP, tert-Butylalcohol, complexes with DMC ***14049-79-7DP,*** Zinc hexacyanocobaltate, complexes with tert-butylalc. derivs.
RL: ***CAT (Catalyst use);*** IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(composite metal cyanide complex catalyst, process for producing the same,and use of same)

IT ***14049-79-7DP,*** Zinc hexacyanocobaltate, complexes with tert-butylalc. derivs.
RL: ***CAT (Catalyst use);*** IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(composite metal cyanide complex catalyst, process for producing the same,and use of same)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1060823 HCAPLUS Full-text
DOCUMENT NUMBER: 142:38743
TITLE: Process for preparing double metal cyanide catalyzed polyols
INVENTOR(S): Le-Khac, Bi; Gentile, Todd D.
PATENT ASSIGNEE(S): Bayer Antwerp, N.V., USA
SOURCE: U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004249104	A1	20041209	US 2003-457264	20030609
US 6884826	B2	20050426		
WO 2004111107	A1	20041223	WO 2004-US17833	20040607

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

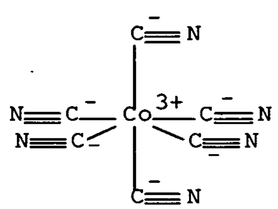
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-457264 A 20030609

AB A process for preparing a ***polyoxyalkylene polyol*** comprises: combining a starter compound having active hydrogen atoms with a double metal cyanide catalyst; activating the double metal cyanide catalyst with a first alkylene oxide monomer; polyoxyalkylating the starter compound with a mixture of the first alkylene oxide monomer and a second alkylene oxide monomer in which the first alkylene oxide monomer content of the mixture decreases as content of the second alkylene oxide monomer increases over the course of the polyoxyalkylation; digesting unreacted monomers of the first alkylene oxide and, the second alkylene oxide; and capping the polyol by adding the second

alkylene oxide thereto, wherein the first alkylene oxide monomer and the second alkylene oxide monomer are different. The polyols are useful in polyurethanes.

IC ICM C08G018-00
ICS C08G059-68
INCL 528044000; X52-840.9; X52-841.0; X52-841.4
CC 35-6 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 67
IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(foam, elastomer, sealant, coating and adhesive; process for preparing double metal cyanide catalyzed polyols)
IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(process for preparing double metal cyanide catalyzed polyols)
IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(process for preparing double metal cyanide catalyzed polyols)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:650024 HCAPLUS Full-text
DOCUMENT NUMBER: 141:174871
TITLE: ***Polyether polyol*** compositions prepared by using composite metal cyanide complex catalysts for urethane prepolymers
INVENTOR(S): Suzuki, Chitoshi; Fukuda, Hiroki; Ikai, Shigeru
PATENT ASSIGNEE(S): Asahi Glass Company, Ltd., Japan
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004067633	A1	20040812	WO 2004-JP737	20040128

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

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          GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
          LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI
    EP 1589071          A1    20051026   EP 2004-705931         20040128
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
          IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
    CN 1742052          A     20060301   CN 2004-80002782       20040128
    US 2005267279       A1    20051201   US 2005-188888         20050726
PRIORITY APPLN. INFO.:                   JP 2003-19062      A   20030128
                                         WO 2004-JP737      W   20040128
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AB The ***polyether polyol*** composition comprises a ***polyether polyol*** (e.g., dipropylene glycol-initiated polypropylene glycol) obtained by a ring-opening polymerization of an alkylene oxide (e.g., propylene oxide) in the presence of a composite metal cyanide complex catalyst (zinc hexacyanocobaltate); and ≥1 phosphoric acid compound containing a phosphoric acid selected from orthophosphoric acid, polyphosphoric acid, and polymetaphosphoric acid and/or their partial ester, wherein the content of the metal derived from the composite metal cyanide complex catalyst is 1-30 ppm (based on ***polyether polyol***) and the phosphoric acid compound content is 0.5-100 ppm (based on the ***polyether polyol***). The ***polyether polyol*** is reacted with a polyisocyanate (e.g., TDI 80) at a reduced rate to give an isocyanate-terminated prepolymer with good storage stability.

IC ICM C08L071-02
ICS C08G065-10; C08G018-48

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 35, 78

ST ***polyoxyalkylene polyol*** phosphoric acid polyurethane storage stability; metal cyanide complex catalyst ***polyether polyol*** prepn

IT Cyanides (inorganic), uses
RL: MOA (Modifier or additive use); USES (Uses)
(complexes; ***polyether polyol*** composition prepared by using composite metal cyanide complex catalysts for urethane prepolymers)

IT Polymerization catalysts
(***polyether polyol*** composition prepared by using composite metal cyanide complex catalysts for urethane prepolymers)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(***polyether polyol*** composition prepared by using composite metal cyanide complex catalysts for urethane prepolymers)

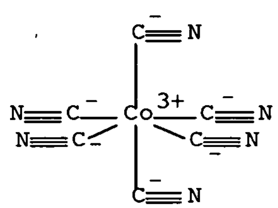
IT Polyphosphoric acids
RL: MOA (Modifier or additive use); USES (Uses)
(***polyether polyol*** composition prepared by using composite metal cyanide complex catalysts for urethane prepolymers)

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-; ***polyether polyol*** composition prepared by using composite metal cyanide complex catalysts for urethane prepolymers)

IT 7664-38-2D, Phosphoric acid, alkyl esters 10343-62-1D, Metaphosphoric acid, poly-
RL: MOA (Modifier or additive use); USES (Uses)
(***polyether polyol*** composition prepared by using composite metal cyanide complex catalysts for urethane prepolymers)

IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(***polyoxyalkylene polyol*** compns. prepared by using

composite metal cyanide complex catalysts for urethane prepolymers)
IT 25322-69-4P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(***polyoxyalkylene polyol*** compns. prepared by using composite metal cyanide complex catalysts for urethane prepolymers)
IT ***9057-91-4P***
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(***polyoxyalkylene polyol*** compns. prepared by using composite metal cyanide complex catalysts for urethane prepolymers)
IT 7664-38-2, Orthophosphoric acid, uses 12645-31-7, AP 8
RL: MOA (Modifier or additive use); USES (Uses)
(***polyoxyalkylene polyol*** compns. prepared by using composite metal cyanide complex catalysts for urethane prepolymers)
IT 7646-85-7, Zinc chloride, reactions 13963-58-1, Potassium hexacyano cobaltate
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of composite metal cyanide complex catalysts for ***polyoxyalkylene polyols***)
IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(***polyoxyalkylene polyol*** compns. prepared by using composite metal cyanide complex catalysts for urethane prepolymers)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)

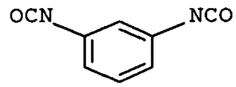


●3/2 Zn^{2+}

IT ***9057-91-4P***
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(***polyoxyalkylene polyol*** compns. prepared by using composite metal cyanide complex catalysts for urethane prepolymers)
RN 9057-91-4 HCAPLUS
CN Poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

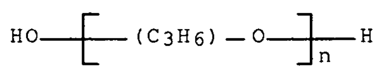
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1— Me

CM 2

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



L38 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:411697 HCAPLUS Full-text
DOCUMENT NUMBER: 140:407874
TITLE: Polyester-***polyether polyols***, urethane prepolymers therefrom, manufacture thereof, and curable urethane compositions and adhesives therefrom
INVENTOR(S): Tsushimo, Yukio; Suzuki, Chitoshi
PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004143314	A2	20040520	JP 2002-310923	20021025
PRIORITY APPLN. INFO.:			JP 2002-310923	20021025

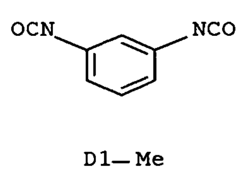
AB The polyester-***polyether polyols*** are prepared by ring-opening polymerization of ≥3 mol of alkylene oxides to 1 mol (based on active H) of polyester polyols with OH value 30-250 mg-KOH/g in the presence of catalysts. The polyester-***polyether polyols*** are reacted with polyisocyanates to give urethane prepolymers. Compns. containing the prepolymers are useful for adhesives showing low viscosity and high adhesiveness. Thus, propylene oxide was polymerized in the presence of poly(3-methylpentanediol adipate) diol and Zn hexacyanocobaltate/tert- BuOH/tert-BuOCH2CH2OH complex and reacted with MDI to give an urethane prepolymer (NCO index 273, viscosity 19.2 at 25°), which was applied on a polypropylene film and cured at 20° and relative humidity 60% to give a film, showing A hardness 35 and tensile strength 2.84 and 3.80, at elongation 100 and 300%, resp.

IC ICM C08G063-66
ICS C08G018-42; C09J175-04

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
IT 690615-55-5P 690615-56-6P 690615-57-7P ***690615-60-2P***
RL: ***IMF (Industrial manufacture)***; RCT (Reactant); ***PREP (Preparation)***; RACT (Reactant or reagent)
(comprised of actual and assumed monomers; manufacture of urethane prepolymers from polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
IT ***690615-58-8P 690615-59-9P***
RL: ***IMF (Industrial manufacture)***; RCT (Reactant); TEM (Technical or engineered material use); ***PREP (Preparation)***; RACT (Reactant or reagent); USES (Uses)
(comprised of actual and assumed monomers; manufacture of urethane prepolymers from polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
IT ***157886-93-6P 690615-61-3P 690615-62-4P***
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(comprised of actual and assumed monomers; manufacture of urethane prepolymers from polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
IT ***690680-41-2***
RL: ***CAT (Catalyst use)***; USES (Uses)
(ring-opening polymerization catalysts; manufacture of urethane prepolymers from
polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
IT ***690615-60-2P***
RL: ***IMF (Industrial manufacture)***; RCT (Reactant); ***PREP (Preparation)***; RACT (Reactant or reagent)
(comprised of actual and assumed monomers; manufacture of urethane prepolymers from polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
RN 690615-60-2 HCAPLUS
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene, methyloxirane and 3-methyl-1,5-pentanediol, block (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



CM 2

CRN 4457-71-0
CMF C6 H14 O2

```
               Me
               |
HO—CH2—CH2—CH—CH2—CH2—OH
```

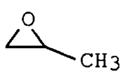
CM 3

CRN 124-04-9
CMF C6 H10 O4

$HO_2C—(CH_2)_4—CO_2H$

CM 4

CRN 75-56-9
CMF C3 H6 O



IT ***690615-58-8P 690615-59-9P***
RL: ***IMF (Industrial manufacture)***; RCT (Reactant); TEM (Technical or engineered material use); ***PREP (Preparation)***; RACT (Reactant or reagent); USES (Uses)
(comprised of actual and assumed monomers; manufacture of urethane prepolymers from polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
RN 690615-58-8 HCAPLUS
CN Hexanedioic acid, polymer with 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane and 3-methyl-1,5-pentanediol, block (9CI) (CA INDEX NAME)

CM 1

CRN 4457-71-0
CMF C6 H14 O2

```
               Me
               |
HO—CH2—CH2—CH—CH2—CH2—OH
```

CM 2

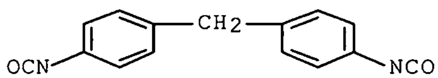
CRN 124-04-9

CMF C6 H10 O4

$HO_2C—(CH_2)_4—CO_2H$

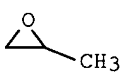
CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



CM 4

CRN 75-56-9
CMF C3 H6 O



RN 690615-59-9 HCAPLUS
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,1'-methylenebis[4-isocyanatobenzene] and methyloxirane, block (9CI) (CA INDEX NAME)

CM 1

CRN 124-04-9
CMF C6 H10 O4

$HO_2C—(CH_2)_4—CO_2H$

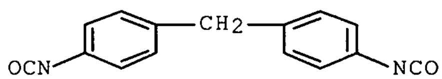
CM 2

CRN 110-63-4
CMF C4 H10 O2

HO— $(CH_2)_4$ —OH

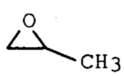
CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



CM 4

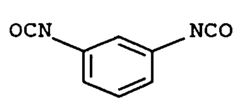
CRN 75-56-9
CMF C3 H6 O



IT ***157886-93-6P 690615-61-3P 690615-62-4P***
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(comprised of actual and assumed monomers; manufacture of urethane prepolymers from polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
RN 157886-93-6 HCAPLUS
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1— Me

CM 2

CRN 4457-71-0
CMF C6 H14 O2

```
                 Me
                 |
HO— CH2— CH2— CH— CH2— CH2— OH
```

CM 3

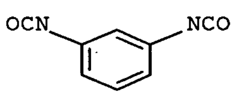
CRN 124-04-9
CMF C6 H10 O4

$HO_2C—(CH_2)_4—CO_2H$

RN 690615-61-3 HCAPLUS
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,3-diisocyanatomethylbenzene, 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1— Me

CM 2

CRN 4457-71-0
CMF C6 H14 O2

```
                 Me
                 |
HO— CH2— CH2— CH— CH2— CH2— OH
```

CM 3

CRN 124-04-9
CMF C6 H10 O4

$HO_2C-(CH_2)_4-CO_2H$

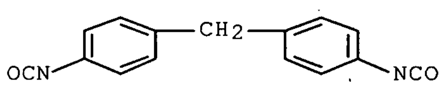
CM 4

CRN 110-63-4
CMF C4 H10 O2

$HO-(CH_2)_4-OH$

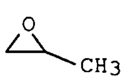
CM 5

CRN 101-68-8
CMF C15 H10 N2 O2



CM 6

CRN 75-56-9
CMF C3 H6 O



RN 690615-62-4 HCAPLUS
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,1'-methylenebis[4-isocyanatobenzene], methyloxirane and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 4457-71-0
CMF C6 H14 O2

$HO-CH_2-CH_2-CH(Me)-CH_2-CH_2-OH$

CM 2

CRN 124-04-9
CMF C6 H10 O4

$HO_2C-(CH_2)_4-CO_2H$

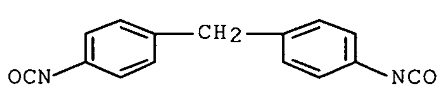
CM 3

CRN 110-63-4
CMF C4 H10 O2

$HO-(CH_2)_4-OH$

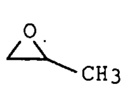
CM 4

CRN 101-68-8
CMF C15 H10 N2 O2



CM 5

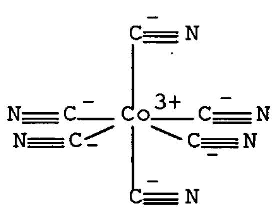
CRN 75-56-9
CMF C3 H6 O



IT ***690680-41-2***
RL: ***CAT (Catalyst use)***; USES (Uses)
(ring-opening polymerization catalysts; manufacture of urethane prepolymers from
polyoxyalkylene-polyester polyols for low-viscosity high-adhesiveness adhesives)
RN 690680-41-2 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, (OC-6-11)-, zinc, compd. with 2-(1,1-dimethylethoxy)ethanol and 2-methyl-2-propanol (2:3:?:?) (9CI) (CA INDEX NAME)

CM 1

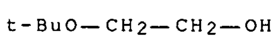
CRN 14049-79-7
CMF C6 Co N6 . 3/2 Zn
CCI CCS



●3/2 Zn^{2+}

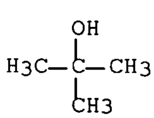
CM 2

CRN 7580-85-0
CMF C6 H14 O2



CM 3

CRN 75-65-0
CMF C4 H10 O



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L38  ANSWER 14 OF 44  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2004:268218  HCAPLUS  Full-text
DOCUMENT NUMBER:          140:287875
TITLE:                    Procedure for the production of polyether alcohols.
PATENT ASSIGNEE(S):       BASF A.-G., Germany
SOURCE:                   Ger. Offen., 12 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
     DE 10244283          A1    20040401    DE 2002-10244283       20020923
     WO 2004029131        A1    20040408    WO 2003-EP10155        20030912
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2003273863        A1    20040419    AU 2003-273863         20030912
PRIORITY APPLN. INFO.:                      DE 2002-10244283    A  20020923
                                            WO 2003-EP10155     W  20030912
```

AB ***Polyether polyols*** are manufactured by catalytic polymerization of alkylene oxides (e. g., a mixture of propylene oxide and ethylene oxide) with multi-metal cyanide complex as a catalyst (e. g. Zn hexacyanocobaltate), thereby the free alkylene oxide content in reactor is sustained at ≤ 8%. ***Polyether polyols*** are useful in polyurethane foam manufacturing and as starters (e. g. propoxylated mixture of glycerol and monoethylene glycol) in catalytic polymerization of alkylene oxides.

IC ICM C08G065-10
ICS C08G018-48

CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37

ST ***polyether polyol*** alkylene oxide propylene glycol copolymer DMC catalyst; polyoxyalkylene polyurethane foam

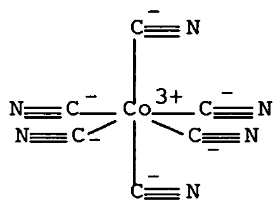
IT Cyanides (inorganic), uses
RL: CAT (Catalyst use); USES (Uses)
(***polyether polyols***, manufactured by DMC catalytic polymerization of alkylene oxides, useful for polyurethane foam manufacture)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(***polyether polyols***, manufactured by DMC catalytic polymerization of alkylene oxides, useful for polyurethane foam manufacture)

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(***polyether polyols***, manufactured by DMC catalytic
polymerization of alkylene oxides, useful for polyurethane foam
manufacture)
IT Plastic foams
RL: TEM (Technical or engineered material use); USES (Uses)
(***polyether polyols***, manufactured by DMC catalytic
polymerization of alkylene oxides, useful for polyurethane foam
manufacture)
IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-; ***polyether polyols***, manufactured by
DMC catalytic polymerization of alkylene oxides, useful for polyurethane
foam
manufacture)
IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(polyurethane with ethylene oxide-propylene oxide copolymer ether with
glycerol and MDI-containing prepolymer; ***polyether polyols***
, manufactured by DMC catalytic polymerization of alkylene oxides, useful
for
polyurethane foam manufacture)
IT Polymerization catalysts
(ring-opening; ***polyether polyols***, manufactured by DMC
catalytic polymerization of alkylene oxides, useful for polyurethane foam
manufacture)
IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(***polyether polyols***, manufactured by DMC catalytic
polymerization of alkylene oxides, useful for polyurethane foam
manufacture)
IT 56-81-5DP, Glycerol, reaction product with ethylene oxide-propylene oxide
copolymer and monoethylene glycol, polyurethane with TDI 80/20
75-21-8DP, Ethylene oxide-, polymer with propylene oxide, ether with
glycerol- monoethylene glycol mixture 75-56-9DP, Propylene oxide, polymer
with ethylene oxide, ether with glycerol- monoethylene glycol mixture
107-21-1DP, Monoethylene glycol, reaction product with ethylene
oxide-propylene oxide copolymer and glycerol, polyurethane with TDI 80/20
25322-69-4P, Polypropylene glycol
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(***polyether polyols***, manufactured by DMC catalytic
polymerization of alkylene oxides, useful for polyurethane foam
manufacture)
IT 101-68-8DP, MDI, polyurethane with ethylene oxide-propylene oxide
copolymer ether with glycerol and polypropylene glycol 9082-00-2DP,
Ethylene oxide-propylene oxide copolymer ether with glycerol, polyurethane
with polypropylene glycol and MDI-containing prepolymer 25322-69-4DP,
Polypropylene glycol, polyurethane with ethylene oxide-propylene oxide
copolymer ether with glycerol and MDI-containing prepolymer 26471-62-5DP,
TDI, polyurethane with reaction product of oxirane polymer with glycerol
and monoethylene glycol 122878-95-9DP, Lupranate T 80, polyurethane with
reaction product of oxirane polymer with glycerol and monoethylene glycol
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(***polyether polyols***, manufactured by DMC catalytic
polymerization of alkylene oxides, useful for polyurethane foam
manufacture)
IT ***14049-79-7***, Zinc hexacyanocobaltate

RL: ***CAT (Catalyst use)***; USES (Uses)
(***polyether polyols***, manufactured by DMC catalytic polymerization of alkylene oxides, useful for polyurethane foam manufacture)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

L38 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:736410 HCAPLUS Full-text
DOCUMENT NUMBER: 140:375600
TITLE: Synthesis of low-monol ***polyether polyols*** by using highly active catalysts and their applications to high-performance polyurethanes
AUTHOR(S): Kim, Il; Ahn, Jun-Tae; Park, Inha; Lee, Sanghyun
CORPORATE SOURCE: Depart. of Polymer Sci.&Eng., Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Polyurethanes Conference 2002, Conference Proceedings, Salt Lake City, UT, United States, Oct. 13-16, 2002 (2002), 583-593. Alliance for the Polyurethanes Industry: Arlington, Va.
CODEN: 69EMGV
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Polymns. of propylene oxide have been carried out by using double metal cyanide (DMC) catalysts based on Zn3[Co(CN)6]2. By controlling the type and the amount of complexing agent during preparation of catalyst the catalytic activity, initiation time, and the unsatn. level in ***polyether polyols*** could be tuned. By using polytetramethylene ether glycol (PTMEG) as a co-complexing agent together with tertiarybutyl alc., conventional complexing agent, the catalytic activity was sharply improved, the initiation time became short, and the unsatn. level was greatly lowered. The selection of the type of PTMEG was also important to maximize the effect of co-complexing agent. Various catalysts prepared by changing the complexing agent were characterized by XPS, IR spectroscopy, and x-ray powder diffraction. 13C NMR anal. showed that the polyols have a random distribution of the configurational sequences and head-to-tail regiosequence, even if the amount of [rr] ***triad*** of polyol produced by DMC catalyst was larger than that of polyol by conventional KOH catalyst. The distortionless enhancement by polarization transfer anal. showed that there exist regioirregular sequences as well. The stress-strain curves of methylene diisocyanate/1,4-butanediol cured polyurethanes showed that the monol content contained in polyol showed a dramatic effect on the mech. properties of resulting polyurethane.

CC 35-5 (Chemistry of Synthetic High Polymers)
IT Polymerization catalysts
(in preparation of low-monol ***polyether polyols*** by using highly active catalysts)
IT Polyoxyalkylenes, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in preparation of low-monol ***polyether polyols*** by using highly active catalysts)
IT Elongation, mechanical
Glass transition temperature
Stress-strain relationship
Tensile strength
(of polyurethanes prepared from low-monol ***polyether polyols***)
IT ***Polyurethanes, preparation***
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyoxyalkylene-, block; preparation of low-monol ***polyether polyols*** by using highly active catalysts and their applications to high-performance polyurethanes)
IT Polyoxyalkylenes, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of low-monol ***polyether polyols*** by using highly active catalysts and their applications to high-performance polyurethanes)
IT 7646-85-7, Zinc chloride ($ZnCl_2$), reactions 13963-58-1, Potassium hexacyanocobaltate
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of catalyst for low-monol ***polyether polyols***)
IT 75-65-0, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of low-monol ***polyether polyols*** by using highly active catalysts)
IT 25322-69-4P, Polypropylene glycol
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in preparation of low-monol ***polyether polyols*** by using highly active catalysts)
IT ***106208-51-9P***, 1,4-Butanediol-MDI-polypropylene glycol block copolymer
RL: PRP (Properties); ***SPN (Synthetic preparation); PREP (Preparation)***
(preparation of low-monol ***polyether polyols*** and their applications to high-performance polyurethanes)
IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of low-monol ***polyether polyols*** by using highly active catalysts)
IT 25190-06-1, Polytetramethylene ether glycol
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of low-monol ***polyether polyols*** by using highly active catalysts)
IT ***106208-51-9P***, 1,4-Butanediol-MDI-polypropylene glycol block copolymer
RL: PRP (Properties); ***SPN (Synthetic preparation); PREP (Preparation)***
(preparation of low-monol ***polyether polyols*** and their

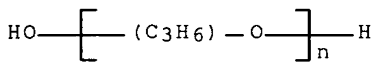
applications to high-performance polyurethanes)

RN 106208-51-9 HCAPLUS

CN 1,4-Butanediol, polymer with α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

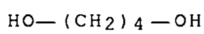
CM 1

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



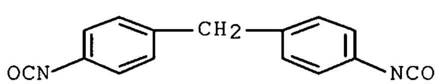
CM 2

CRN 110-63-4
CMF C4 H10 O2



CM 3

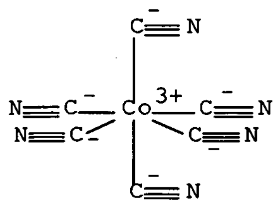
CRN 101-68-8
CMF C15 H10 N2 O2



IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of low-monol ***polyether polyols*** by using highly active catalysts)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:646725 HCAPLUS Full-text
DOCUMENT NUMBER: 139:181160
TITLE: ***Polyoxyalkylene polyols*** with low OH value, their manufacture without adsorbents, and manufacture of flexible polyurethane foams
INVENTOR(S): Kuribayashi, Katsuji; Sasaki, Takayuki; Kimura, Yuji
PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2003231747	A2	20030819	JP 2002-31311	20020207
PRIORITY APPLN. INFO.:				JP 2002-31311	20020207

AB The polyols, having OH value of ≤15 mgKOH/g and the number of OH of 2-8, include ethylene oxide-C≤3 alkylene oxide random copolymer chains (ethylene oxide content of 1-60%) manufactured by using mixed metal cyanide complex catalysts. Thus, ethylene oxide was polymerized with propylene oxide in the presence of propylene glycol glycerin ether and Zn3[Co(CN)6]2-glyme complex to give a random copolymer (OH value 6.9 mgKOH/g), 100 parts of which was foamed with ethylene oxide-propylene oxide block copolymer sorbitol ether 10, Coronate T 80 (2,4-TDI-2,6-TDI mixture) 53.7, water 5 parts and other additives to give a foam showing core d. 22.6 kg/m3, 25% hardness 78 N/314 cm2, and hysteresis loss 39.3%.

IC ICM C08G065-28
ICS C08G018-48; C08G065-10; C08G101-00

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

IT Plastic foams
RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

IT Polymerization catalysts
(mixed metal cyanide complexes; manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

IT Polyurethanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-, crosslinked; manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

IT 110-71-4D, Glyme, complex with zinc hexacyanocobaltate ***14049-79-7D***, Zinc hexacyanocobaltate, glyme complex
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalysts; manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

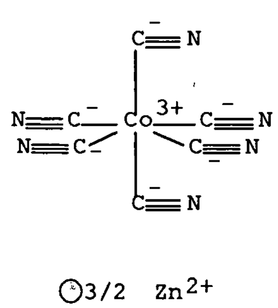
IT ***57516-88-8P***, Ethylene oxide-propylene oxide copolymer glycerin ether-2,4-TDI-2,6-TDI copolymer ***117197-73-6P***, Coronate T 80-ethylene oxide-propylene oxide copolymer glycerin ether copolymer ***577965-49-2P***, Coronate T 80-ethylene oxide-propylene oxide copolymer glycerin ether-ethylene oxide-propylene oxide block copolymer sorbitol ether copolymer ***577965-51-6P***, Ethylene oxide-propylene oxide copolymer glycerin ether-ethylene oxide-propylene oxide block copolymer sorbitol ether-2,4-TDI-2,6-TDI copolymer
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(crosslinked; manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

IT 9082-00-2P, Ethylene oxide-propylene oxide copolymer glycerin ether
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

IT ***14049-79-7D***, Zinc hexacyanocobaltate, glyme complex
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalysts; manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



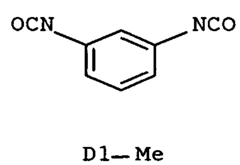
IT ***57516-88-8P***, Ethylene oxide-propylene oxide copolymer glycerin

ether-2,4-TDI-2,6-TDI copolymer ***117197-73-6P***, Coronate T 80-ethylene oxide-propylene oxide copolymer glycerin ether copolymer ***577965-49-2P***, Coronate T 80-ethylene oxide-propylene oxide copolymer glycerin ether-ethylene oxide-propylene oxide block copolymer sorbitol ether copolymer ***577965-51-6P***, Ethylene oxide-propylene oxide copolymer glycerin ether-ethylene oxide-propylene oxide block copolymer sorbitol ether-2,4-TDI-2,6-TDI copolymer
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(crosslinked; manufacture of ***polyoxyalkylene polyols*** with low OH value without adsorbents for manufacture of flexible polyurethane foams)

RN 57516-88-8 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS

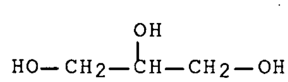


CM 2

CRN 9082-00-2
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 56-81-5
CMF C3 H8 O3

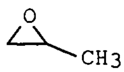


CM 4

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

CRN 75-21-8
CMF C2 H4 O

RN 117197-73-6 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with Coronate T 80 (9CI) (CA INDEX NAME)

CM 1

CRN 91825-07-9
CMF Unspecified
CCI PMS, MAN

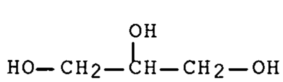
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 9082-00-2
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 56-81-5
CMF C3 H8 O3

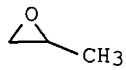


CM 4

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

CRN 75-21-8
CMF C2 H4 O

RN 577965-49-2 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with D-glucitol (6:1), block, polymer with Coronate T 80 and methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 91825-07-9
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

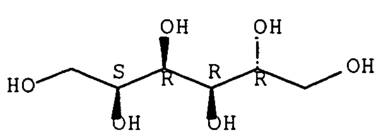
CM 2

CRN 111445-43-3
CMF C6 H14 O6 . 6 (C3 H6 O . C2 H4 O)x

CM 3

CRN 50-70-4
CMF C6 H14 O6

Absolute stereochemistry.

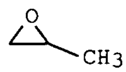


CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

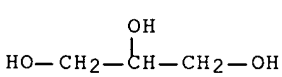
CRN 75-21-8
CMF C2 H4 O

CM 7

CRN 9082-00-2
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 8

CRN 56-81-5
CMF C3 H8 O3

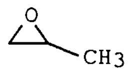


CM 9

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 10

CRN 75-56-9
CMF C3 H6 O



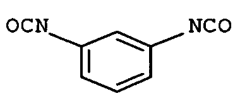
CM 11

CRN 75-21-8
CMF C2 H4 O

RN 577965-51-6 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with D-glucitol (6:1), block, polymer with 1,3-diisocyanatomethylbenzene and methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1— Me

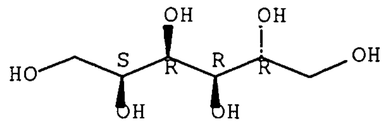
CM 2

CRN 111445-43-3
CMF C6 H14 O6 . 6 (C3 H6 O . C2 H4 O)x

CM 3

CRN 50-70-4
CMF C6 H14 O6

Absolute stereochemistry.

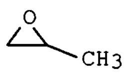


CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

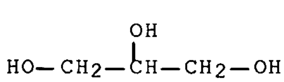
CRN 75-21-8
CMF C2 H4 O

CM 7

CRN 9082-00-2
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 8

CRN 56-81-5
CMF C3 H8 O3

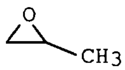


CM 9

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 10

CRN 75-56-9
CMF C3 H6 O



CM 11

CRN 75-21-8
CMF C2 H4 O

L38 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:641012 HCAPLUS Full-text
DOCUMENT NUMBER: 140:271250
TITLE: Synthesis of ultra-low monol ***polyether polyols*** by multi-metal catalysts
AUTHOR(S): Kim, Il; Ahn, Jun-Tae; Park, Dae-Won; Lee, Sang-Hyun; Park, Inha
CORPORATE SOURCE: Dept. of Polymer Science and Engineering, Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Studies in Surface Science and Catalysis (2003), 145(Science and Technology in Catalysis 2002), 529-530
CODEN: SSCTDM; ISSN: 0167-2991
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polymns. of propylene oxide (PO) have been carried out by using double metal cyanide (DMC) catalysts based on Zn3[Co(CN)6]2. By using complexing agent during preparation of catalyst, the catalytic activity, initiation time, and the unsatn. level in ***polyether polyols*** could be tuned. The catalysts were characterized by XPS, IR spectroscopy, arid x-ray powder diffraction. 13C NMR anal. showed that the polyols have a random distribution of the configurational sequences. The stress-strain curves of methylene

diisocyanate/1,4-butanediol cured polyurethanes (PU) showed that the monol content of polyol showed a dramatic effect on the mech. properties of PU.

CC 35-3 (Chemistry of Synthetic High Polymers)

IT ***Polyurethanes, preparation***
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyoxyalkylene-; preparation of ultralow monol polypropylene glycol by multi-metal catalysts)

IT ***7646-85-7***, Zinc chloride, uses ***13963-58-1***, Potassium hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(preparation of ultralow monol polypropylene glycol by multi-metal catalysts)

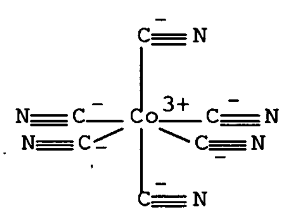
IT ***37205-91-7P***, 1,4-Butanediol-MDI-polypropylene glycol copolymer
RL: PRP (Properties); ***SPN (Synthetic preparation); PREP (Preparation)***
(preparation of ultralow monol polypropylene glycol by multi-metal catalysts)

IT ***7646-85-7***, Zinc chloride, uses ***13963-58-1***, Potassium hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(preparation of ultralow monol polypropylene glycol by multi-metal catalysts)

RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

RN 13963-58-1 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, tripotassium, (OC-6-11)- (9CI) (CA INDEX NAME)



●3 K^+

IT ***37205-91-7P***, 1,4-Butanediol-MDI-polypropylene glycol copolymer
RL: PRP (Properties); ***SPN (Synthetic preparation); PREP (Preparation)***
(preparation of ultralow monol polypropylene glycol by multi-metal catalysts)

RN 37205-91-7 HCAPLUS
CN 1,4-Butanediol, polymer with α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS

HO—[(C3H6) — O]n—H

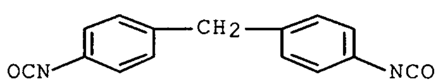
CM 2

CRN 110-63-4
CMF C4 H10 O2

HO— (CH2) 4 —OH

CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:610105 HCAPLUS Full-text
DOCUMENT NUMBER: 139:150084
TITLE: Process for the copolymerization of alkylene oxides and carbon dioxide using suspensions of multi-metal cyanide compounds
INVENTOR(S): Hinz, Werner; Dexheimer, Edward M.; Bohres, Edward; Grosch, Georg Heinrich
PATENT ASSIGNEE(S): BASF Corp., USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2003149232	A1	20030807	US 2002-66855		20020204
US 6762278	B2	20040713			
CA 2418435	AA	20030804	CA 2003-2418435		20030203
PRIORITY APPLN. INFO.:			US 2002-66855	A	20020204

AB A method of forming a ***polyether***-carbonate ***polyol*** using a multimetal cyanide compound is disclosed. The method includes providing a multi-metal cyanide compound having a crystalline structure and a content of platelet-shaped particles of at least 30%, based on the weight of the multimetal cyanide compound and further including at least two of the following components: an organic complexing agent, water, a polyether, and a surface-active substance. Then an alc. initiator is reacted with at least one alkylene oxide and carbon dioxide under a pos. pressure in the presence of the multimetal cyanide compound, thereby forming the ***polyether***-carbonate ***polyol***.

IC ICM C08G059-68

INCL 528412000

CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(polycarbonate-polyoxyalkylene-, foamed; process for copolymn. of alkylene oxides and carbon dioxide using suspensions of multi-metal cyanide compds.)

IT ***573714-85-9P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(foamed; process for copolymn. of alkylene oxides and carbon dioxide using suspensions of multi-metal cyanide compds.)

IT ***557-34-6DP,*** Zinc acetate, multi-metal cyanide compds.
19528-17-7DP, Hexacyanocobaltic acid, multi-metal cyanide compds.
RL: ***CAT (Catalyst use);*** IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(process for copolymn. of alkylene oxides and carbon dioxide using suspensions of multi-metal cyanide compds.)

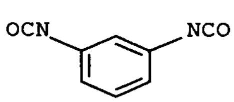
IT ***573714-85-9P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(foamed; process for copolymn. of alkylene oxides and carbon dioxide using suspensions of multi-metal cyanide compds.)

RN 573714-85-9 HCAPLUS

CN Oxirane, methyl-, polymer with carbon dioxide, 1,3-diisocyanatomethylbenzene and α,α',α''-1,2,3-propanetriyltris[ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

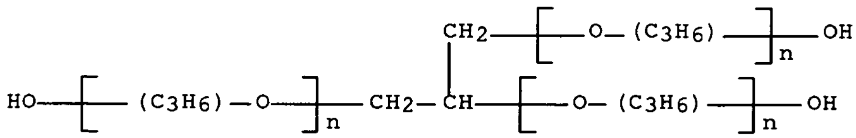
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

CM 2

CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS

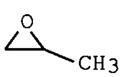


CM 3

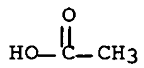
CRN 124-38-9
CMF C O2

CM 4

CRN 75-56-9
CMF C3 H6 O

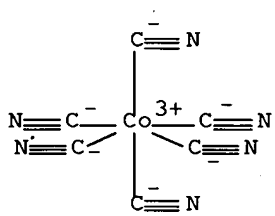


IT ***557-34-6DP,*** Zinc acetate, multi-metal cyanide compds.
19528-17-7DP, Hexacyanocobaltic acid, multi-metal cyanide compds.
RL: ***CAT (Catalyst use);*** IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(process for copolymn. of alkylene oxides and carbon dioxide using suspensions of multi-metal cyanide compds.)
RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

RN 19528-17-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, trihydrogen, (OC-6-11)- (9CI)
(CA INDEX NAME)



●3 H^+

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:443903 HCAPLUS Full-text
DOCUMENT NUMBER: 139:7386
TITLE: Double metal cyanide complex-containing slurry catalysts, their manufacture in short time, and manufacture of polyether poly- or monools as materials for polyurethane foams
INVENTOR(S): Sugiyama, Kayoko; Suzuki, Chitoshi
PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003165836	A2	20030610	JP 2001-365061	20011129

PRIORITY APPLN. INFO.: JP 2001-365061 20011129
OTHER SOURCE(S): MARPAT 139:7386

AB Title catalysts comprise double metal cyanides (prepared from metal halides and alkali metal cyanometalates) coordinated by organic ligands containing R1CMe2(OR0)nOH [R1 = Me, Et; R0 = (Me- or Et-substituted) CH2CH2; n = 1-3] dispersed at 2-20% in compds. bearing 1-4 OH and mol. weight 400-3000. Thus, ZnCl2 was reacted with K3Co(CN)6, successively reacted with ethylene glycol mono-tert-Bu ether (I), filtered, the cake double with I-H2O mixture, filtered, and dispersed in I and polyoxypropylene diol with mol. weight 1500

to give a slurry catalyst. Propylene oxide was polymerized in the presence of 200 ppm of the catalyst and poly(propylene oxide) glycerin ether to give a ***polyether polyol*** with mol. weight distribution 1.10 with induction time 40 min.

IC ICM C08G065-10

CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37

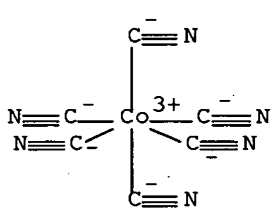
IT ***Polyurethanes, preparation***
RL: PNU (Preparation, unclassified); PREP (Preparation)
(polyoxyalkylene-; double metal cyanide complex-containing slurry catalysts for manufacture of polyether poly- or monools as materials for high-quality polyurethane foams)

IT ***14049-79-7DP,*** Zinc hexacyanocobaltate, complexes with ethylene glycol monoethers
RL: ***CAT (Catalyst use);*** IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(double metal cyanide complex-containing slurry catalysts for manufacture of
polyether poly- or monools as materials for high-quality polyurethane foams)

IT ***14049-79-7DP,*** Zinc hexacyanocobaltate, complexes with ethylene glycol monoethers
RL: ***CAT (Catalyst use);*** IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(double metal cyanide complex-containing slurry catalysts for manufacture of
polyether poly- or monools as materials for high-quality polyurethane foams)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

L38 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:396947 HCAPLUS Full-text

DOCUMENT NUMBER: 138:385947

TITLE: Manufacture of polyether alcohols by alkoxylation of H-functional precursors with microporous double metal cyanide catalysts

INVENTOR(S): Bohres, Edward; Mueller, Ulrich; Ruppel, Raimund; Baum, Eva

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2

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DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE       APPLICATION NO.       DATE
     ---------------     ----   --------   --------------------  --------
     WO 2003042280        A1    20030522   WO 2002-EP12492       20021108
     WO 2003042280        C1    20041014
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
             CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     DE 10156117          A1    20030528   DE 2001-10156117      20011115
     EP 1448664           A1    20040825   EP 2002-802998        20021108
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
     JP 2005509070        T2    20050407   JP 2003-544112        20021108
     US 2004249221        A1    20041209   US 2004-493608        20040423
PRIORITY APPLN. INFO.:                     DE 2001-10156117   A  20011115
                                           WO 2002-EP12492    W  20021108
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AB Polyether alcs., useful for the manufacture of (cellular) polyurethanes, were manufactured by alkoxylation of H-functional precursors in the presence of porous double metal cyanide catalysts having surface area >100 m2/g, preferably >450 m2/g. The catalyst have high activity with short induction period. For example, ethoxylation-propoxylation of ethoxylated glycerol (OH number 152 mg KOH/g) at 120° in the presence of 100 ppm of double metal cyanide catalyst containing 25.6% Co and 11.9% Zn, having surface area 375 m2/g (preparation given), gave ***polyether polyol*** with OH number 47.1 mg KOH/g and viscosity 599 mPa·s. The catalyst activation time was 7 min.

IC ICM C08G065-26
ICS B01J027-26; C08G018-48

CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38, 67

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(polyoxyalkylene-, cellular; manufacture of polyether alcs. by alkoxylation of H-functional precursors using microporous double metal cyanide catalysts)

IT ***7440-48-4***, Cobalt, uses ***7440-66-6***, Zinc, uses
RL: ***CAT (Catalyst use)***; USES (Uses)
(manufacture of polyether alcs. by alkoxylation of H-functional precursors using microporous double metal cyanide catalysts)

IT ***7440-48-4***, Cobalt, uses ***7440-66-6***, Zinc, uses
RL: ***CAT (Catalyst use)***; USES (Uses)
(manufacture of polyether alcs. by alkoxylation of H-functional precursors using microporous double metal cyanide catalysts)

RN 7440-48-4 HCAPLUS

CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:341219 HCAPLUS Full-text
DOCUMENT NUMBER: 139:117765
TITLE: Polymerization of propylene oxide by using double metal cyanide catalysts and the application to polyurethane elastomer
AUTHOR(S): Kim, Il; Ahn, Jun-Tae; Ha, Chang Sik; Yang, Chul Sik; Park, Inha
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Jangjeon-dong, Geumjeong-gu, Pusan, 609-735, S. Korea
SOURCE: Polymer (2003), 44(11), 3417-3428
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polymns. of propylene oxide have been carried out by using double metal cyanide (DMC) catalysts based on Zn3[Co(CN)6]2. By controlling the type and the amount of complexing agent during preparation of catalyst the catalytic activity, initiation time, and the unsatn. level in ***polyether polyols*** could be tuned. Various catalysts prepared by changing the complexing and co-complexing agents were characterized by XPS, IR spectroscopy, and X-ray powder diffraction. Highly active catalyst prepared by choosing a polytetramethylene ether glycol as a co-complexing agent resulted in polyoxypropylenes (POP) with low very low unsatn. level (0.003-0.006 meq/g) and with narrow mol. weight distribution (MWD = 1.02-1.04). The active sites of DMC-catalyzed polymerization of propylene oxide have both cationic and coordinative characters. Anal. of 13C NMR showed that the polyols have a random distribution of the configurational sequences and head-to-tail regio sequence, even if the amount of [rr] ***triad*** of polyol produced by DMC catalyst was larger than that of polyol by conventional KOH catalyst. The distortionless enhancement by polarization transfer anal. showed that there exist regio irregular sequences as well. The stress-strain curves of methylene diisocyanate/1,4-butanediol cured POP-based polyurethane elastomers showed that the unsatn. content contained in POP showed a dramatic effect on the mech. properties.

CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 39, 67

IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(polymerization catalyst; preparation of polypropylene glycol using double metal
cyanide catalysts for polyurethane elastomers)

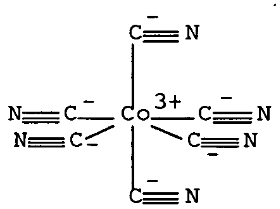
IT ***106208-51-9P***, 1,4-Butanediol-MDI-polypropylene glycol block copolymer ***115708-98-0P***, 1,4-Butanediol-MDI-polypropylene glycol

glycerol ether copolymer
RL: PRP (Properties); ***SPN (Synthetic preparation); PREP (Preparation)***
(rubber; preparation of polypropylene glycol using double metal cyanide catalysts for polyurethane elastomers)

IT ***14049-79-7P,*** Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use);*** SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(polymerization catalyst; preparation of polypropylene glycol using double metal
cyanide catalysts for polyurethane elastomers)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

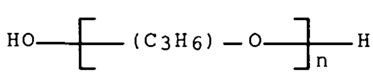
IT ***106208-51-9P,*** 1,4-Butanediol-MDI-polypropylene glycol block copolymer ***115708-98-0P,*** 1,4-Butanediol-MDI-polypropylene glycol glycerol ether copolymer
RL: PRP (Properties); ***SPN (Synthetic preparation); PREP (Preparation)***
(rubber; preparation of polypropylene glycol using double metal cyanide catalysts for polyurethane elastomers)

RN 106208-51-9 HCAPLUS

CN 1,4-Butanediol, polymer with α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,1'-methylenebis[4-isocyanatobenzene], block (9CI) (CA INDEX NAME)

CM 1

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



CM 2

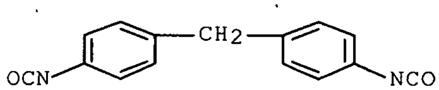
CRN 110-63-4

CMF C4 H10 O2

HO— $(CH_2)_4$ —OH

CM 3

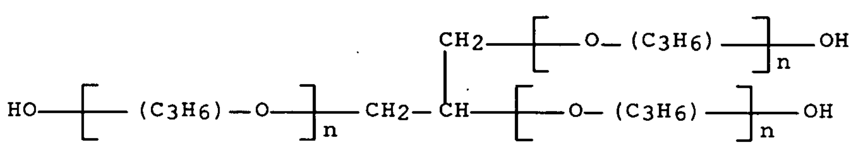
CRN 101-68-8
CMF C15 H10 N2 O2



RN 115708-98-0 HCAPLUS
CN 1,4-Butanediol, polymer with 1,1'-methylenebis[4-isocyanatobenzene] and α,α',α''-1,2,3-propanetriyltris[ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS



CM 2

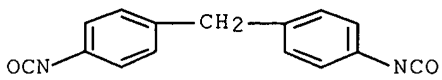
CRN 110-63-4
CMF C4 H10 O2

HO— $(CH_2)_4$ —OH

CM 3

CRN 101-68-8

CMF C15 H10 N2 O2



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:129133 HCAPLUS Full-text
DOCUMENT NUMBER: 139:7311
TITLE: Sequence structure of polyether catalyzed by Fe-Zn double-metal cyanide complex catalysts
AUTHOR(S): Chen, Su; Chen, Li
CORPORATE SOURCE: Chemical College, Nanjing University of Technology, Nanjing, 210009, Peop. Rep. China
SOURCE: Colloid and Polymer Science (2003), 281(3), 288-291
CODEN: CPMSB6; ISSN: 0303-402X
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A double-metal cyanide (DMC) complex catalyst was prepared by reaction of an aqueous solution of zinc chloride and potassium hexacyanoferrate with complexing agents to form the DMC precipitate The DMC was combined with organic complexing agents such as t-butanol and polyols to obtain active catalysts for use in synthesis of polyethers. The complexing agent was incorporated into the catalyst structure and was required for activity. ***Polyether polyols*** were synthesized using the DMC catalysts by ring opening polymerization of propylene oxide and glycerol, to obtain poly(oxypropylene) and propylene oxide-glycerol copolymer. High-resolution 13C NMR and 1H NMR spectra were used to identify the sequence and stereo-irregular structure of the ***polyether polyols***. Head-tail addition and a random stereo-irregular structure were dominant in the microstructure of the ***polyether polyols***.

CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36

ST zinc iron cyanide prepn complex tertbutanol polyether structure; ring opening polymn catalyst zinc iron cyanide complex; propylene oxide ring opening polymn zinc iron cyanide catalyst; polyoxyalkylene chain sequence ***stereoregular*** structure catalyst role

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 23 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:55036 HCAPLUS Full-text
DOCUMENT NUMBER: 138:107184
TITLE: Producing a polyol and a polymer dispersed polyol for a polyurethane soft foam
INVENTOR(S): Toyota, Yoshinori; Horie, Akio; Wada, Hiroshi; Sugiyama, Kayoko; Akagi, Etsuko
PATENT ASSIGNEE(S): Asahi Glass Company Ltd., Japan
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1277775	A1	20030122	EP 2002-15683	20020717
EP 1277775	B1	20060927		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1400231	A	20030305	CN 2002-128299	20020716
CA 2393891	AA	20030118	CA 2002-2393891	20020717
JP 2003301041	A2	20031021	JP 2002-207976	20020717
TW 242570	B1	20051101	TW 2002-91115957	20020717
EP 1632513	A1	20060308	EP 2005-22134	20020717
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK				
US 2003100801	A1	20030529	US 2002-197528	20020718
US 6815467	B2	20041109		

PRIORITY APPLN. INFO.: JP 2001-218348 A 20010718
JP 2002-32839 A 20020208
EP 2002-15683 A3 20020717

AB A ***polyoxyalkylene polyol*** is made by subjecting propylene oxide and ethylene oxide to ring-opening addition polymerization in the presence of a catalyst, a double metal cyanide complex catalyst forming an oxypropylene block chain, subjecting ethylene oxide and propylene oxide to ring-opening addition polymerization randomly to form an oxyalkylene random chain, changing the catalyst and subjecting ethylene oxide to ring-opening addition polymerization in the presence of an alkali metal catalyst to form an oxyethylene block chain, to give a ***polyoxyalkylene polyol*** having a hydroxyl value 5-56 mg KOH/g, initiator residue ≤25%, oxypropylene block content 5-50%, oxyethylene group content 5-60%, and a ratio of primary hydroxyl groups among terminal hydroxyl groups ≥60 mol%. A foam formulation contained polymer polyol EO/PO block copolymer glycerol ether (OH value 27.3) 60, acrylonitrile-styrene copolymer particles dispersed in EO/PO copolymer glycerol ether 40, EO/PO copolymer sorbitol ether 3.0, diethanolamine 1.0, catalyst 0.72, foam stabilizer 1.0, blowing agent 3.0, and isocyanate (Coronate 1021) to give isocyanate index 105. The foam had d. 48.4 kg/m3, heat/humidity permanent compression set (JIS K6400) 10.3%, resonance frequency (JASO B407-87) 3.3 Hz, and crush load 588 N.

IC ICM C08G018-48
ICS C08G018-76; C08G018-08; C08G065-26

CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38

ST ***polyoxyalkylene polyol*** polyurethane soft foam;
ethylene oxide propylene oxide block copolymer polyol

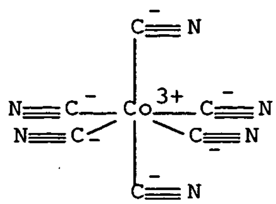
IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-; producing polyoxyalkylene dispersed polyol for urethane foam with balance of hardness, vibration, and durability)

IT Polymerization catalysts
(ring-opening, dual; double metal cyanide complex and alkali metal for preparation of ***polyoxyalkylene polyols***)

IT 75-65-0D, tert-Butyl alcohol, zinc hexacyanocobaltate complex 110-71-4D, Glyme, zinc hexacyanocobaltate complex 124-41-4, Sodium methoxide 1310-58-3, Potassium hydroxide, uses 7580-85-0D, Ethylene glycol mono-tert-butyl ether, zinc hexacyanocobaltate complex ***14049-79-7D***, Zinc hexacyanocobaltate, complex with ethylene glycol ethers
RL: ***CAT (Catalyst use)***; USES (Uses)
(producing polyoxyalkylene dispersed polyol for urethane foam with balance of hardness, vibration, and durability)

IT ***14049-79-7D,*** Zinc hexacyanocobaltate, complex with ethylene glycol

ethers
RL: ***CAT (Catalyst use)***; USES (Uses)
(producing polyoxyalkylene dispersed polyol for urethane foam with balance of hardness, vibration, and durability)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:941805 HCAPLUS Full-text
DOCUMENT NUMBER: 138:14315
TITLE: A process for in-situ production of a blend of polyether monol and ***polyether polyol*** useful for viscoelastic polyurethane foams
INVENTOR(S): Reese, Ii Jack R.; Hager, Stanley L.
PATENT ASSIGNEE(S): Bayer Antwerpen, N.V., Belg.
SOURCE: U.S., 16 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6491846	B1	20021210	US 2001-886510	20010621
CA 2450785	AA	20030103	CA 2002-2450785	20020613
WO 2003000770	A1	20030103	WO 2002-IB3084	20020613

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1401912	A1	20040331	EP 2002-749250	20020613
EP 1401912	B1	20050601		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

CN 1518572	A	20040804	CN 2002-812472		20020613
BR 2002010587	A	20040810	BR 2002-10587		20020613
JP 2004530767	T2	20041007	JP 2003-507170		20020613
AT 296849	E	20050615	AT 2002-749250		20020613
PT 1401912	T	20051031	PT 2002-749250		20020613
ES 2242871	T3	20051116	ES 2002-2749250		20020613
TW 593390	B	20040621	TW 2002-91113416		20020620
HK 1068359	A1	20060908	HK 2005-100537		20050120
PRIORITY APPLN. INFO.:			US 2001-886510	A	20010621
			WO 2002-IB3084	W	20020613

AB The process comprises steps of: (1) introducing a mixture containing an initial starter (a monol, A) and a double metal cyanide (DMC) catalyst into a reaction vessel, (2) feeding an epoxide mixture (B) containing propylene oxide and ethylene oxide into the vessel, (3) allowing B to react with A, (4) continuously adding A while continuing to feed B, and (5) allowing the mixture to polymerize until the resultant blend of polyether monol and ***polyether polyol*** has an average equivalent weight 350-750, and an average functionality 2-4. An example was in-situ prepared from a monol, propylene oxide and glycerin in the presence of zinc hexacyanocobalt tert-butanol complex as catalyst to give a blend of polyoxypropylene monol and polyoxypropylene triol, which was mixed and reacted with TDI to give a flexible polyurethane foam.

IC ICM C08G018-14

INCL 252182270; 252182240; 521170000; 521174000

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38

ST ***polyether*** monol ***polyol*** blend insitu prodn viscoelastic polyurethane foam; polyoxypropylene monol triol mixt TDI flexible polyurethane foam prepn

IT Etherification catalysts
(for in-situ production of ***polyether*** monol and ***polyol*** mixture useful for viscoelastic polyurethane foams)

IT ***Polyethers, preparation***
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(***hydroxy-containing***; manufacture of viscoelastic polyurethane foams using in-situ prepared ***polyether*** monol and ***polyol*** mixture)

IT Plastic foams
Polyurethanes, preparation
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(manufacture of viscoelastic polyurethane foams using in-situ prepared ***polyether*** monol and ***polyol*** mixture)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(monol derivs., reaction product with polyoxypropylene triol, propylene glycol and TDI; manufacture of viscoelastic polyurethane foams using in-situ prepared ***polyether*** monol and ***polyol*** mixture)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monol derivs.; in-situ production of ***polyether*** monol and ***polyol*** mixture useful for viscoelastic polyurethane foams)

IT 75-65-0D, tert-Butanol, zinc hexacyanocobaltate complex
14049-79-7D, Zinc hexacyanocobaltate, tert-butanol complex
RL: ***CAT (Catalyst use)***; USES (Uses)
(etherification catalyst; in-situ production of ***polyether*** monol and ***polyol*** mixture useful for viscoelastic polyurethane foams)

IT 25322-69-4DP, Polypropylene glycol, monol derivs. 25791-96-2P, Polypropylene glycol glycerin ether

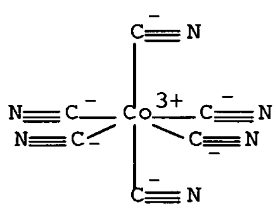
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(in-situ production of ***polyether*** monol and ***polyol*** mixture useful for viscoelastic polyurethane foams)

IT 57-55-6DP, Propylene glycol, polymer with polyoxypropylene monol and triol, and TDI 9003-11-6DP, Ethylene oxide-propylene oxide copolymer, monol derivs., reaction product with polyether triol, propylene glycol and TDI 9082-00-2DP, Ethylene oxide-propylene oxide copolymer glycerin ether, polymer with polyether monol, propylene glycol and TDI 25322-69-4DP, Polypropylene glycol, monol derivs., reaction product with polyoxypropylene triol, propylene glycol and TDI 25791-96-2DP, Polypropylene glycol glycerin ether, polymer with polyoxypropylene monol, propylene glycol and TDI 26471-62-5DP, TDI, polymer with polyoxypropylene monol and triol, and propylene glycol
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(manufacture of viscoelastic polyurethane foams using in-situ prepared ***polyether*** monol and ***polyol*** mixture)

IT ***14049-79-7D***, Zinc hexacyanocobaltate, tert-butanol complex
RL: ***CAT (Catalyst use)***; USES (Uses)
(etherification catalyst; in-situ production of ***polyether*** monol and ***polyol*** mixture useful for viscoelastic polyurethane foams)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:669446 HCAPLUS Full-text
DOCUMENT NUMBER: 137:201744
TITLE: Improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts
INVENTOR(S): Hofmann, Joerg; Ehlers, Stephan; Klinksiek, Bernd; Klesczewski, Bert; Steinlein, Christian; Obendorf, Lars; Pielartzik, Harald
PATENT ASSIGNEE(S): Bayer AG, Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 10108485	A1	20020905	DE 2001-10108485		20010222
CA 2438645	AA	20020906	CA 2002-2438645		20020211
WO 2002068502	A1	20020906	WO 2002-EP1397		20020211
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
EP 1366106	A1	20031203	EP 2002-704707		20020211
EP 1366106	B1	20041117			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
CN 1501953	A	20040602	CN 2002-805434		20020211
BR 2002007512	A	20040727	BR 2002-7512		20020211
AT 282655	E	20041215	AT 2002-704707		20020211
JP 2005506392	T2	20050303	JP 2002-568009		20020211
PT 1366106	T	20050331	PT 2002-704707		20020211
ES 2233798	T3	20050616	ES 2002-2704707		20020211
US 2002198278	A1	20021226	US 2002-77855		20020219
US 6670406	B2	20031230			
TW 232227	B1	20050511	TW 2002-91102854		20020220
HK 1066231	A1	20051111	HK 2004-109160		20041119
PRIORITY APPLN. INFO.:			DE 2001-10108485	A	20010222
			WO 2002-EP1397	W	20020211

AB Procedure for preparation of ***polyether polyols*** by polyaddn. of alkylene oxides to active H-containing starting materials in the presence of double metal cyanide catalysts (DMC), whereby the reaction mixture is 1-1000 times led through a zone of energy d. ≥5 + 105 J/m3 and has a residence time ≥10-6 s. The ***polyether polyols*** prepared by a jet mixer have improved foaming properties and may be used for preparation of flexible polyurethane foams. Thus, a trifunctional polyol of mol. weight 3,000 g/mol was prepared from glycerol and propylene oxide at 130° using a DMC catalyst and by treatment with a jet mixer. Then, to a mixture of 100 g polyol, 6 g H2O, 0.60 g silicone stabilizer (Tegostab BF 2370), 0.15 g Desmorapid SO, and 0.10 g bis(dimethylamino)ethyl ether (as catalysts), 73.40 g Desmodur T80 was admixed under stirring. The foaming mixture was 30 min stored in a drying oven at 100°. The foam was of fine, regular cell structure without any cracks and collapses.

IC ICM C08G065-10
ICS C08G065-26; C08G018-48

CC 35-7 (Chemistry of Synthetic High Polymers)

ST ***polyether polyol*** double metal cyanide catalyst prepn; polyurethane flexible foam ***polyether polyol*** DMC prepn; glycerol propylene oxide polyol Desmodur T80 polyurethane foam; sorbitol propylene oxide polyol Desmodur T80 hydrazine polyurethane foam

IT Polymerization catalysts
(double metal cyanide; improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT Plastic foams
RL: TEM (Technical or engineered material use); USES (Uses)
(flexible; improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT Polyoxyalkylenes, preparation
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses)
(improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT Mixers (processing apparatus)
(jet; improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT ***Polyurethanes, preparation***
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-, flexible foams; improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT 301-10-0, Desmorapid SO 3033-62-3, Bis(dimethylamino)ethyl ether
RL: CAT (Catalyst use); USES (Uses)
(for polyurethane preparation; improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT 52625-13-5P, Propylene oxide-sorbitol copolymer ***151274-15-6P***, Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-polymer with Desmodur T80 ***452962-84-4P***
RL: PRP (Properties); ***SPN (Synthetic preparation)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT 25791-96-2P, Glycerol-propylene oxide copolymer
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT 75-65-0, tert.-Butanol, uses
RL: CAT (Catalyst use); USES (Uses)
(ligand of DMC catalyst, for polyol preparation; improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT ***14049-79-7***, Zinchexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(with tert.-butanol ligands, for polyol preparation; improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

IT ***151274-15-6P***, Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-polymer with Desmodur T80 ***452962-84-4P***
RL: PRP (Properties); ***SPN (Synthetic preparation)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(improved method for preparation of ***polyether polyols*** with double metal cyanide catalysts)

RN 151274-15-6 HCAPLUS
CN Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-, polymer with Desmodur T 80 (9CI) (CA INDEX NAME)

CM 1

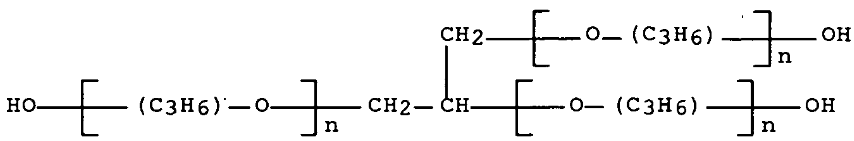
CRN 55887-98-4
CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS



RN 452962-84-4 HCAPLUS
CN Hydrazine, polymer with Desmodur T 80 and α-hydro-ω-hydroxy[poly[oxy(methyl-1,2-ethanediyl)]] ether with D-glucitol (6:1) (9CI) (CA INDEX NAME)

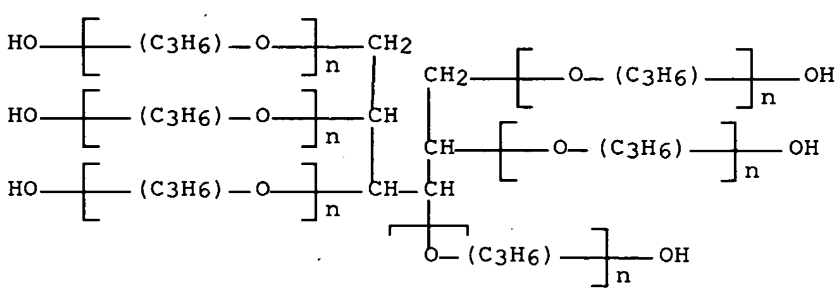
CM 1

CRN 55887-98-4
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 52625-13-5
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C6 H14 O6
CCI IDS, PMS

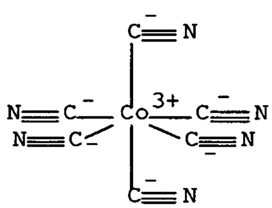


CM 3

CRN 302-01-2
CMF H4 N2

H_2N-NH_2

IT 14049-79-7, Zinchexacyanocobaltate
RL: CAT (Catalyst use); USES (Uses)
(with tert.-butanol ligands, for polyol preparation; improved method for preparation of polyether polyols with double metal cyanide catalysts)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



● 3/2 Zn^{2+}

L38 ANSWER 26 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:669445 HCAPLUS Full-text
DOCUMENT NUMBER: 137:201743
TITLE: Improved method for preparation of **polyether polyols** using double metal cyanide catalysts
INVENTOR(S): Hofmann, Joerg; Ehlers, Stephan; Klinksiek, Bernd; Obendorf, Lars; Steinlein, Christian; Klesczewski, Bert
PATENT ASSIGNEE(S): Bayer AG, Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10108484	A1	20020905	DE 2001-10108484	20010222
CA 2438647	AA	20020906	CA 2002-2438647	20020211
WO 2002068503	A1	20020906	WO 2002-EP1398	20020211

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

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        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
            CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     EP 1368407          A1     20031210    EP 2002-714155         20020211
     EP 1368407          B1     20050518
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     BR 2002007766       A      20040427    BR 2002-7766           20020211
     CN 1505650          A      20040616    CN 2002-805435         20020211
     JP 2005506393       T2     20050303    JP 2002-568010         20020211
     AT 295861           E      20050615    AT 2002-714155         20020211
     PT 1368407          T      20050930    PT 2002-714155         20020211
     ES 2242003          T3     20051101    ES 2002-2714155        20020211
     US 2002169229       A1     20021114    US 2002-78951          20020219
     US 6776925          B2     20040817
     TW 232228           B1     20050511    TW 2002-91102855       20020220
     HK 1066819          A1     20060407    HK 2004-109847         20041213
PRIORITY APPLN. INFO.:                      DE 2001-10108484    A  20010222
                                            WO 2002-EP1398      W  20020211
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AB Procedure for preparation of ***polyether polyols*** by polyaddn. of alkylene oxides to active H-containing starting materials in the presence of double metal cyanide catalysts (DMC), whereby the reaction mixture is led through a zone of energy d. ≥105 J/m3 and residence time ≥10-6 s. The ***polyether polyols*** have improved foaming properties and may be used for preparation of polyurethane foams. Thus, to a mixture of 100 g polyol prepared from glycerol and propylene oxide using a DMC catalyst, 6 g H2O, 0.60 g silicone stabilizer (Tegostab BF 2370), 0.10 g bis(dimethylamino)ethylether, and 0.15 g Desmorapid SO, 73.40 g Desmodur T80 was admixed under stirring. The foaming mixture was 30 min stored in a drying oven at 100°. The foam was of fine, regular cell structure without any cracks and collapses.

IC ICM C08G065-10
ICS C08G018-48

CC 35-7 (Chemistry of Synthetic High Polymers)

ST ***polyether polyol*** double metal cyanide catalyst prepn;
polyurethane soft foam ***polyether polyol*** DMC prepn;
glycerol propylene oxide polyol Desmodur T80 polyurethane foam

IT Polymerization catalysts
(double metal cyanide; improved method for preparation of ***polyether polyols*** using double metal cyanide catalysts)

IT Polyoxyalkylenes, preparation
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(improved method for preparation of ***polyether polyols*** using double metal cyanide catalysts)

IT Plastic foams
RL: TEM (Technical or engineered material use); USES (Uses)
(improved method for preparation of ***polyether polyols*** using double metal cyanide catalysts)

IT ***Polyurethanes, preparation***
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-, soft foams; improved method for preparation of ***polyether polyols*** using double metal cyanide catalysts)

IT 301-10-0, Desmorapid SO 3033-62-3, Bis(dimethylamino)ethylether
RL: CAT (Catalyst use); USES (Uses)
(for polyurethane preparation; improved method for preparation of ***polyether polyols*** using double metal cyanide catalysts)

IT ***151274-15-6P***, Poly[oxy(methyl-1,2-ethanediyl)],

α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-polymer
with Desmodur T80
RL: PRP (Properties); ***SPN (Synthetic preparation)***; TEM
(Technical or engineered material use); ***PREP (Preparation)***; USES
(Uses)
(improved method for preparation of ***polyether polyols***
using double metal cyanide catalysts)

IT 25791-96-2P, Glycerol-propylene oxide copolymer
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(improved method for preparation of ***polyether polyols***
using double metal cyanide catalysts)

IT 75-65-0, tert.-Butanol, uses
RL: CAT (Catalyst use); USES (Uses)
(ligand of DMC catalyst, for polyol preparation; improved method for
preparation
of ***polyether polyols*** using double metal cyanide
catalysts)

IT ***14049-79-7***, Zinchexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(with tert.-butanol ligands, for polyol preparation; improved method for
preparation of ***polyether polyols*** using double metal
cyanide catalysts)

IT ***151274-15-6P***, Poly[oxy(methyl-1,2-ethanediyl)],
α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-polymer
with Desmodur T80
RL: PRP (Properties); ***SPN (Synthetic preparation)***; TEM
(Technical or engineered material use); ***PREP (Preparation)***; USES
(Uses)
(improved method for preparation of ***polyether polyols***
using double metal cyanide catalysts)

RN 151274-15-6 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-
propanetriyltris[ω-hydroxy-, polymer with Desmodur T 80 (9CI) (CA
INDEX NAME)

CM 1

CRN 55887-98-4
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 25791-96-2
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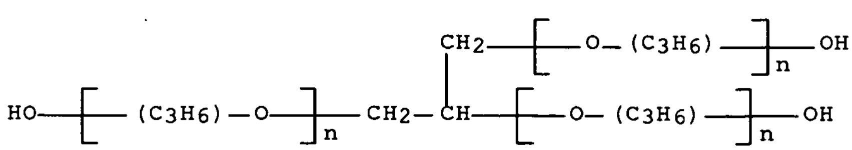
CCI IDS, PMS



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IT    14049-79-7, Zinchexacyanocobaltate
      RL: CAT (Catalyst use); USES (Uses)
         (with tert.-butanol ligands, for polyol preparation; improved method for
         preparation of polyether polyols using double metal
         cyanide catalysts)
RN    14049-79-7  HCAPLUS
CN    Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI)  (CA
      INDEX NAME)
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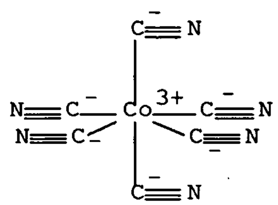

●3/2 Zn^{2+}

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L38  ANSWER 27 OF 44  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2001:165740  HCAPLUS  Full-text
DOCUMENT NUMBER:         134:223442
TITLE:                   Polyoxyalkylene polyols and their
                         manufacture and use for production of polyurethanes
INVENTOR(S):             Harre, Kathrin; Lorenz, Reinhard; Grosch, Georg
                         Heinrich; Erbes, Joerg; Junge, Dieter; Bauer, Stephan;
                         Baum, Eva; Ostrowski, Thomas
PATENT ASSIGNEE(S):      BASF A.-G., Germany
SOURCE:                  Ger. Offen., 10 pp.
                         CODEN: GWXXBX
DOCUMENT TYPE:           Patent
LANGUAGE:                German
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

    PATENT NO.          KIND    DATE        APPLICATION NO.        DATE
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    DE 19941242          A1     20010308    DE 1999-19941242       19990831
    CA 2382613           AA     20010308    CA 2000-2382613        20000823
    WO 2001016209        A1     20010308    WO 2000-EP8218         20000823
        W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
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            HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
            LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
            SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
            YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
            CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
    BR 2000013530        A      20020430    BR 2000-13530          20000823
    EP 1208132           A1     20020529    EP 2000-953196         20000823
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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          IE, SI, LT, LV, FI, RO, MK, CY, AL
     JP 2003508563       T2    20030304    JP 2001-520762         20000823
PRIORITY APPLN. INFO.:                     DE 1999-19941242    A  19990831
                                           WO 2000-EP8218      W  20000823
```

AB   Polyols are manufactured by polymerization of ethylene oxide and propylene oxide in the presence of H-functional compds. and multimetal cyanides, with the chains being terminated with blocks formed from C≥3 alkylene oxides. Termination of the polyols in this manner provided precursors for the manufacture of polyurethanes with improved mech. properties.

IC   ICM C08G065-28
      ICS C07B041-04; C07C041-03; C08G018-10; C08G018-28

CC   37-3 (Plastics Manufacture and Processing)

ST   block ***polyoxyalkylene polyol*** manuf multimetal cyanide catalyst; polyurethane mech property enhanced block ***polyoxyalkylene polyol*** precursor

IT   Polyoxyalkylenes, preparation
      RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
         (block; block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

IT   Cyanides (inorganic), preparation
      RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
         (multimetal, polymerization catalysts; block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

IT   ***Polyurethanes, preparation***
      RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
         (polyoxyalkylene-; block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

IT   Polymerization catalysts
         (ring-opening, multimetal cyanides; block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

IT   107498-00-0P, Ethylene oxide-propylene oxide block copolymer glycerol ether
      RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
         (block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

IT   ***112529-09-6P,*** Ethylene oxide-propylene oxide block copolymer glycerol ether-TDI copolymer   329180-87-2P, Ethylene oxide-propylene oxide block copolymer glycerol ether-Lupranate T80A copolymer
      RL: ***IMF (Industrial manufacture)***; PRP (Properties); ***PREP (Preparation)***
         (block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

IT   ***7440-48-4D,*** Cobalt, mixed metal cyanides with zinc, uses
      7440-66-6D, Zinc, mixed metal cyanides with cobalt, uses
      RL: ***CAT (Catalyst use)***; USES (Uses)
         (polymerization catalysts; block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

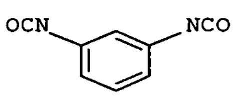
IT   ***112529-09-6P,*** Ethylene oxide-propylene oxide block copolymer glycerol ether-TDI copolymer
      RL: ***IMF (Industrial manufacture)***; PRP (Properties); ***PREP***

(Preparation)
(block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)

RN 112529-09-6 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), block, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



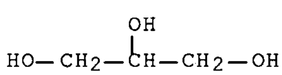
D1— Me

CM 2

CRN 107498-00-0
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 56-81-5
CMF C3 H8 O3

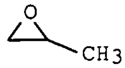


CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

CRN 75-21-8
CMF C2 H4 O

IT **7440-48-4D**, Cobalt, mixed metal cyanides with zinc, uses
7440-66-6D, Zinc, mixed metal cyanides with cobalt, uses
RL: ***CAT (Catalyst use)***; USES (Uses)
(polymerization catalysts; block ***polyoxyalkylene polyols*** with terminal blocks prepared from C≥3 alkylene oxides for manufacture of polyurethanes with improved mech. properties)
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L38 ANSWER 28 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:911325 HCAPLUS Full-text
DOCUMENT NUMBER: 134:57523
TITLE: Resilient polyurethane foams produced from ***polyether polyols***
INVENTOR(S): Hofmann, Jorg; Gupta, Pramod; Dietrich, Manfred; Rabe, Hansjurgen; Gronen, Jurgen; Ooms, Pieter
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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    PATENT NO.          KIND   DATE       APPLICATION NO.       DATE
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    WO 2000078837        A1    20001228   WO 2000-EP5167        20000606
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            CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
            ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
            LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD,
            SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,
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        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
            CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
    DE 19928156          A1    20001228   DE 1999-19928156      19990619
    CA 2375285           AA    20001228   CA 2000-2375285       20000606
    BR 2000011777        A     20020319   BR 2000-11777         20000606
    EP 1194468           A1    20020410   EP 2000-940318        20000606
    EP 1194468           B1    20040915
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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    JP 2003503516        T2    20030128   JP 2001-505593        20000606
    AU 768450            B2    20031211   AU 2000-55295         20000606
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    PT 1194468           T     20041231   PT 2000-940318        20000606
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    TW 591045            B     20040611   TW 2000-89111542      20000614
    ZA 2001009264        A     20021111   ZA 2001-9264          20011109
    US 6858655           B1    20050222   US 2001-18332         20011213
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    HK 1047598           A1    20050603   HK 2002-109209        20021219
PRIORITY APPLN. INFO.:                    DE 1999-19928156   A  19990619
                                          WO 2000-EP5167     W  20000606
```

AB Resilient polyurethane foams are prepared from polyisocyanates and ***polyether polyols*** (number-average mol. weight 700-50,000) comprising ≥1 ethylene oxide-propylene oxide mixed block and obtained in the presence of double metal cyanide (DMC) catalysts. Thus, a DMC catalyst was prepared by reaction of 91.5 mmol ZnCl2 with 12 mmol K3Co(CN)6 in the presence of tert-BuOH and polypropylene glycol (average mol. weight 2000). A trimethylolpropane-initiated polyoxypropylene triol (872.7 g, OH number 380 mg KOH/g) was mixed with 0.3 g of the DMC catalyst and alkoxylated with a mixture of 4614.6 g propylene oxide and 512.7 g ethylene oxide to give a ***polyether polyol*** (I) with OH number 58.1 mg KOH/g and double bond content 7 mmol/kg. Polymerization of 100 parts I with 51.2 parts Desmodur T 80 in the presence of 4 parts H2O gave an open-cell foam with regular cell structure.

IC ICM C08G018-48

CC 37-6 (Plastics Manufacture and Processing)

IT Polyoxyalkylenes, uses
RL: CAT (Catalyst use); USES (Uses)
(DMC alkoxylation catalyst containing; resilient polyurethane foams produced from ***polyether polyols***)

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(polyoxyalkylene-; resilient polyurethane foams produced from ***polyether polyols***)

IT Plastic foams
RL: IMF (Industrial manufacture); PREP (Preparation)
(resilient polyurethane foams produced from ***polyether polyols***)

IT Polymerization catalysts
(ring-opening, double metal cyanide; resilient polyurethane foams

produced from ***polyether polyols***)

IT 75-65-0, tert-Butyl alcohol, uses 25322-69-4, Polypropylene glycol
RL: CAT (Catalyst use); USES (Uses)
(DMC alkoxylation catalyst containing; resilient polyurethane foams produced from ***polyether polyols***)

IT ***14049-79-7,*** Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use);*** USES (Uses)
(resilient polyurethane foams produced from ***polyether polyols***)

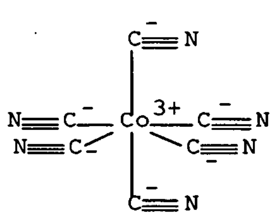
IT ***112529-09-6P 132878-84-3P,*** (Ethylene oxide-propylene oxide block copolymer trimethylolpropane ether)-TDI copolymer ***314065-15-1P,*** Desmodur T 80-(ethylene oxide-propylene oxide block copolymer trimethylolpropane ether) copolymer 314065-16-2P, Desmodur T 65-(ethylene oxide-propylene oxide block copolymer trimethylolpropane ether) copolymer ***314065-17-3P,*** Desmodur T 80-Desmophen 3900I-(ethylene oxide-propylene oxide block copolymer trimethylolpropane ether) copolymer ***314065-18-4P,*** Desmophen 3900I-(ethylene oxide-propylene oxide block copolymer trimethylolpropane ether)-TDI copolymer 314065-19-5P, Desmophen VP PU 10WF22-(ethylene oxide-propylene oxide block copolymer glycerol ether)-Desmodur VP-PU 3230 copolymer ***314065-20-8P,*** Desmodur T 80-(ethylene oxide-propylene oxide block copolymer glycerol ether) copolymer ***314065-21-9P,*** Desmodur T 80-Desmophen 3426L-(ethylene oxide-propylene oxide block copolymer glycerol ether) copolymer ***314065-22-0P,*** Desmophen 3426L-(ethylene oxide-propylene oxide block copolymer glycerol ether)-TDI copolymer
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(resilient polyurethane foams produced from ***polyether polyols***)

IT 107120-02-5P 107498-00-0P, Ethylene oxide-propylene oxide block copolymer glycerol ether
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(resilient polyurethane foams produced from ***polyether polyols***)

IT ***14049-79-7,*** Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use);*** USES (Uses)
(resilient polyurethane foams produced from ***polyether polyols***)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



○3/2 Zn^{2+}

IT ***112529-09-6P 132878-84-3P,*** (Ethylene oxide-propylene

oxide block copolymer trimethylolpropane ether)-TDI copolymer ***314065-15-1P,*** Desmodur T 80-(ethylene oxide-propylene oxide block copolymer trimethylolpropane ether) copolymer ***314065-17-3P,*** Desmodur T 80-Desmophen 3900I-(ethylene oxide-propylene oxide block copolymer trimethylolpropane ether) copolymer ***314065-18-4P,*** Desmophen 3900I-(ethylene oxide-propylene oxide block copolymer trimethylolpropane ether)-TDI copolymer ***314065-20-8P,*** Desmodur T 80-(ethylene oxide-propylene oxide block copolymer glycerol ether) copolymer ***314065-21-9P,*** Desmodur T 80-Desmophen 3426L-(ethylene oxide-propylene oxide block copolymer glycerol ether) copolymer ***314065-22-0P,*** Desmophen 3426L-(ethylene oxide-propylene oxide block copolymer glycerol ether)-TDI copolymer

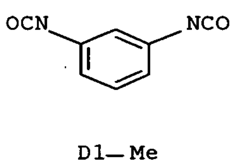
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(resilient polyurethane foams produced from ***polyether polyols***)

RN 112529-09-6 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), block, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS

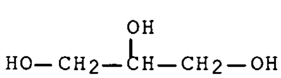


CM 2

CRN 107498-00-0
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 56-81-5
CMF C3 H8 O3



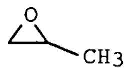
CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



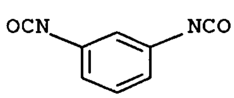
CM 6

CRN 75-21-8
CMF C2 H4 O

RN 132878-84-3 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), block, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



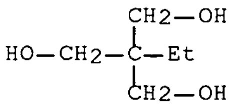
D1—Me

CM 2

CRN 107120-02-5
CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 77-99-6
CMF C6 H14 O3

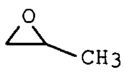


CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

CRN 75-21-8
CMF C2 H4 O

RN 314065-15-1 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), block, polymer with Desmodur T 80 (9CI) (CA INDEX NAME)

CM 1

CRN 55887-98-4
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

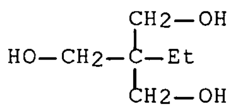
CM 2

CRN 107120-02-5

CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 77-99-6
CMF C6 H14 O3

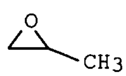


CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

CRN 75-21-8
CMF C2 H4 O

RN 314065-17-3 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), block, polymer with Desmodur T 80 and Desmophen 3900I (9CI) (CA INDEX NAME)

CM 1

CRN 314059-10-4
CMF Unspecified
CCI PMS, MAN

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*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

     CM    2

     CRN   55887-98-4
     CMF   Unspecified
     CCI   MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

     CM    3

     CRN   107120-02-5
     CMF   C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x

          CM    4

          CRN   77-99-6
          CMF   C6 H14 O3
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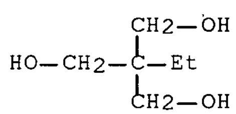

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          CM    5

          CRN   106392-12-5
          CMF   (C3 H6 O . C2 H4 O)x
          CCI   PMS

               CM    6

               CRN   75-56-9
               CMF   C3 H6 O
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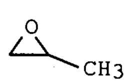

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               CM    7

               CRN   75-21-8
               CMF   C2 H4 O
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RN 314065-18-4 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), block, polymer with Desmophen 3900I and 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

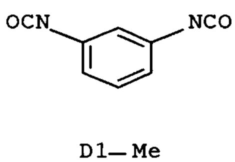
CM 1

CRN 314059-10-4
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS

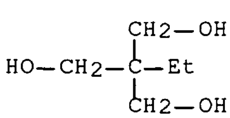


CM 3

CRN 107120-02-5
CMF C6 H14 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 4

CRN 77-99-6
CMF C6 H14 O3



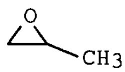
CM 5

CRN 106392-12-5

CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8
CMF C2 H4 O

RN 314065-20-8 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), block, polymer with Desmodur T 80 (9CI) (CA INDEX NAME)

CM 1

CRN 55887-98-4
CMF Unspecified
CCI MAN

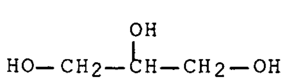
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 107498-00-0
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 3

CRN 56-81-5
CMF C3 H8 O3

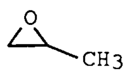


CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

CRN 75-21-8
CMF C2 H4 O

RN 314065-21-9 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), block, polymer with Desmodur T 80 and Desmophen 3426L (9CI) (CA INDEX NAME)

CM 1

CRN 314064-68-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 55887-98-4
CMF Unspecified
CCI MAN

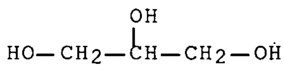
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 107498-00-0
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 4

CRN 56-81-5
CMF C3 H8 O3

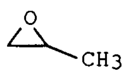


CM 5

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8
CMF C2 H4 O

RN 314065-22-0 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), block, polymer with Desmophen 3426L and 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

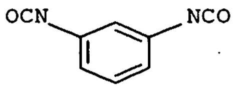
CM 1

CRN 314064-68-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

CM 3

CRN 107498-00-0
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 4

CRN 56-81-5
CMF C3 H8 O3

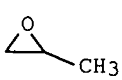
```
              OH
              |
HO—CH2—CH—CH2—OH
```

CM 5

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8
CMF C2 H4 O

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:756764 HCAPLUS Full-text
DOCUMENT NUMBER: 133:322572
TITLE: Production of polyoxyalkylene-polyurethanes
INVENTOR(S): Lorenz, Reinhard; Bauer, Stephan; Junge, Dieter; Baum, Eva; Harre, Kathrin; Erbes, Jorg; Ostrowski, Thomas; Grosch, Georg Heinrich
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2000063270	A1	20001026	WO 2000-EP3229		20000411
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
DE 19917897	A1	20001026	DE 1999-19917897		19990420
CA 2370360	AA	20001026	CA 2000-2370360		20000411
EP 1175454	A1	20020130	EP 2000-926868		20000411
EP 1175454	B1	20021113			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
AT 227750	E	20021115	AT 2000-926868		20000411
JP 2002542353	T2	20021210	JP 2000-612355		20000411
ES 2186649	T3	20030516	ES 2000-926868		20000411
US 6906110	B1	20050614	US 2001-19998		20000411
PRIORITY APPLN. INFO.:			DE 1999-19917897	A	19990420
			WO 2000-EP3229	W	20000411

AB In the title process, which does not cause problems in the preparation of polyurethane foams, polyisocyanates are polymerized with ***polyether polyols*** prepared by the polymerization of epoxides in the presence of polymetal cyanide catalysts. Stirring oligopropoxylated glycerol (OH number 370) 605, Zn hexacyanocobaltate 2.14, ethylene oxide (I) 20, and propylene oxide (II) 130 g at 125° until the pressure dropped, adding 565.5 g I and 3690 g II, and stirring gave a polyol with OH number 48, viscosity 632 mPa-s at 25°, Zn content 23 ppm, and Co content 11 ppm. Mixing this polyol 1000, TDI 487.46, H2O 45, and catalysts and stabilizers 15.4 g gave a foam with start time 11 s, rise time 80 s, and rise height 285 mm.
IC ICM C08G018-48
ICS C08K003-00; C08G018-24
CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 67

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(polyoxyalkylene-, cellular; production of polyoxyalkylene-polyurethanes)

IT 7429-90-5DP, Aluminum, cyanometallates, preparation 7439-93-2DP, Lithium, cyanometallates, preparation 7439-95-4DP, Magnesium, cyanometallates, preparation 7440-09-7DP, Potassium, cyanometallates, preparation 7440-17-7DP, Rubidium, cyanometallates, preparation 7440-23-5DP, Sodium, cyanometallates, preparation 7440-24-6DP, Strontium, cyanometallates, preparation 7440-39-3DP, Barium, cyanometallates, preparation 7440-41-7DP, Beryllium, cyanometallates, preparation 7440-42-8DP, Boron, cyanometallates, preparation 7440-46-2DP, Cesium, cyanometallates, preparation 7440-70-2DP, Calcium, cyanometallates, preparation ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(catalysts for polymerization of epoxides to polyols)

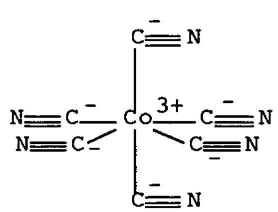
IT 25791-96-2P, Glycerol polypropylene glycol ether (1:3)
RL: IMF (Industrial manufacture); PREP (Preparation)
(catalysts for production of ***polyoxyalkylene polyols***)

IT ***39279-01-1P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(cellular; production of polyoxyalkylene-polyurethanes)

IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(catalysts for polymerization of epoxides to polyols)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

IT ***39279-01-1P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(cellular; production of polyoxyalkylene-polyurethanes)

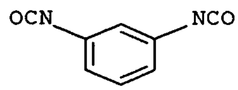
RN 39279-01-1 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2

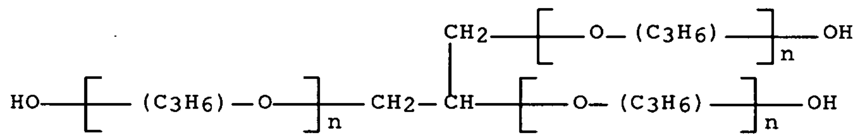
CCI IDS



D1— Me

CM 2

CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:612079 HCAPLUS Full-text
DOCUMENT NUMBER: 133:194052
TITLE: Moisture-curable urethane prepolymer compositions with low viscosity
INVENTOR(S): Tada, Masako; Kashiwame, Kyoteru; Tsuruoka, Kaoru
PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

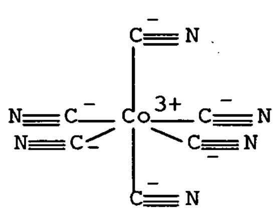
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000239338	A2	20000905	JP 1999-41999	19990219
PRIORITY APPLN. INFO.:			JP 1999-41999	19990219

AB Title compns. comprise (A) SiX3-containing polymers having hydrolyzable silyl groups SiXaR13-a [R1 = C1-20 (un)substituted monovalent organic group; X = OH, hydrolyzable group; a = 1, 2, 3], (B) NCO-terminated urethane prepolymers prepared from polyols and polyisocyanates, and (C) curing catalysts. Thus, a composition containing trimethoxysilyl-containing poly(propylene oxide), dipropylene glycol-propylene oxide copolymer, polypropylene glycol glycerol ether, Millionate MT (MDI), and dibutyltin bis(acetylacetonate) was kept at 20° and humidity 65% for 10 day to give a cured product without foaming.
IC ICM C08G018-10

ICS C08G018-40
CC 37-6 (Plastics Manufacture and Processing)
IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-; low-viscosity moisture-curable compns. containing urethane prepolymers and hydrolyzable silyl-containing polymers)
IT ***19412-90-9***, Glyme-zinc hexacyanocobaltate complex
169156-80-3
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalysts for preparation of ***polyoxyalkylene polyols;***
low-viscosity moisture-curable compns. containing urethane prepolymers and hydrolyzable silyl-containing polymers)
IT ***19412-90-9***, Glyme-zinc hexacyanocobaltate complex
169156-80-3
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalysts for preparation of ***polyoxyalkylene polyols;***
low-viscosity moisture-curable compns. containing urethane prepolymers and hydrolyzable silyl-containing polymers)
RN 19412-90-9 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, (OC-6-11)-, zinc, compd. with 1,2-dimethoxyethane (2:3:?) (9CI) (CA INDEX NAME)

CM 1

CRN 14049-79-7
CMF C6 Co N6 . 3/2 Zn
CCI CCS



●3/2 Zn^{2+}

CM 2

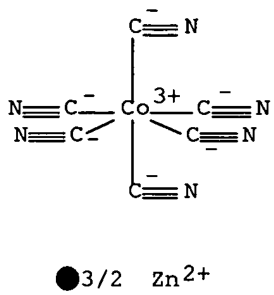
CRN 110-71-4
CMF C4 H10 O2

$MeO—CH_2—CH_2—OMe$

RN 169156-80-3 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, (OC-6-11)-, zinc, compd. with 2-methyl-2-propanol (2:3:?) (9CI) (CA INDEX NAME)

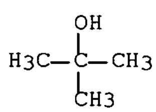
CM 1

CRN 14049-79-7
CMF C6 Co N6 . 3/2 Zn
CCI CCS



CM 2

CRN 75-65-0
CMF C4 H10 O



L38 ANSWER 31 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:388945 HCAPLUS Full-text
DOCUMENT NUMBER: 133:31385
TITLE: Room temperature-curable urethane prepolymer compositions with reduced residual tackiness and improved surface weatherability
INVENTOR(S): Kashime, Kiyoteru
PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000159851	A2	20000613	JP 1998-333123	19981124
PRIORITY APPLN. INFO.:			JP 1998-333123	19981124

AB The compns., useful as sealants, adhesives, waterproofing materials, etc., comprise (A) 100 parts isocyanate-terminated urethane prepolymers manufactured

from (a) ***polyoxyalkylene polyols*** having mol. weight 1,000-15,000/OH and total unsatn. degree ≤0.05 meq/g and (b) polyisocyanates and (B) 1-20 parts photocurable compds. A composition comprising 5 parts Aronix M 8600 (polyester polyacrylate) and 100 parts urethane prepolymer manufactured from polyoxypropylene diol 100, polyoxypropylene triol 30, and Millionate MT 17 parts was cured to give a sheet showing little tackiness and no soiling nor crack after outdoor exposure for 1 mo.

IC ICM C08G018-10
ICS C08F002-44; C08F020-10; C08F290-06

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 42

ST polyurethane photocurable polyester polyacrylate sheet weatherability; ***polyoxyalkylene polyol*** polyisocyanate copolymer curable sheet

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-; room temperature-curable urethane prepolymer compns. with reduced residual tackiness and improved surface weatherability)

IT ***19412-90-9***, Cobaltate(3-), hexacyano-, zinc (2:3), compound with 1,2-dimethoxyethane
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalysts for manufacture of urethane prepolymer; room temperature-curable urethane prepolymer compns. with reduced residual tackiness and improved surface weatherability)

IT ***51447-37-1P 152334-44-6P*** 181298-94-2P, Millionate MT-polypropylene glycol-polypropylene glycol glycerin ether copolymer ***204636-70-4P***
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(room temperature-curable urethane prepolymer compns. with reduced residual tackiness and improved surface weatherability)

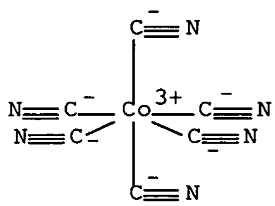
IT ***19412-90-9***, Cobaltate(3-), hexacyano-, zinc (2:3), compound with 1,2-dimethoxyethane
RL: ***CAT (Catalyst use)***; USES (Uses)
(catalysts for manufacture of urethane prepolymer; room temperature-curable urethane prepolymer compns. with reduced residual tackiness and improved surface weatherability)

RN 19412-90-9 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, (OC-6-11)-, zinc, compd. with 1,2-dimethoxyethane (2:3:?) (9CI) (CA INDEX NAME)

CM 1

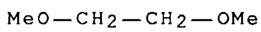
CRN 14049-79-7
CMF C6 Co N6 . 3/2 Zn
CCI CCS



●3/2 Zn^{2+}

CM 2

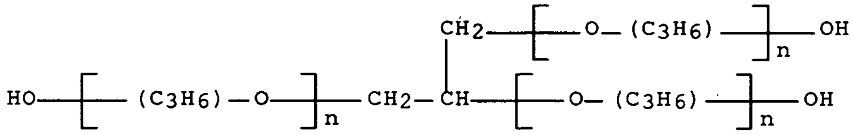
CRN 110-71-4
CMF C4 H10 O2



IT ***51447-37-1P 152334-44-6P 204636-70-4P***
RL: ***IMF (Industrial manufacture)***; TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(room temperature-curable urethane prepolymer compns. with reduced residual tackiness and improved surface weatherability)
RN 51447-37-1 HCAPLUS
CN Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-, polymer with α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

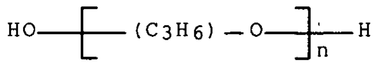
CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS



CM 2

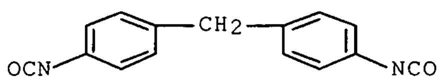
CRN 25322-69-4
CMF (C3 H6 O)n H2 O

CCI IDS, PMS



CM 3

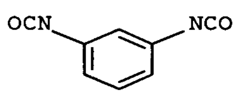
CRN 101-68-8
CMF C15 H10 N2 O2



RN 152334-44-6 HCAPLUS
CN Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene, oxirane and α,α',α''-1,2,3-propanetriyltris[ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

CM 1

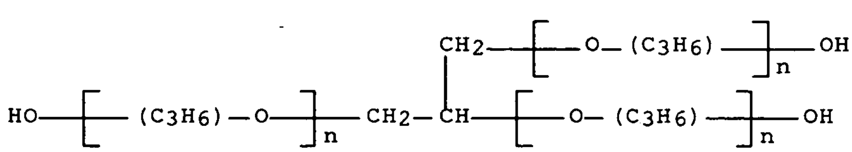
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

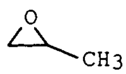
CM 2

CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS



CM 3

CRN 75-56-9
CMF C3 H6 O



CM 4

CRN 75-21-8
CMF C2 H4 O

RN 204636-70-4 HCAPLUS
CN Oxirane, methyl-, polymer with Coronate T 80, oxirane and α,α',α''-1,2,3-propanetriyltris[ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

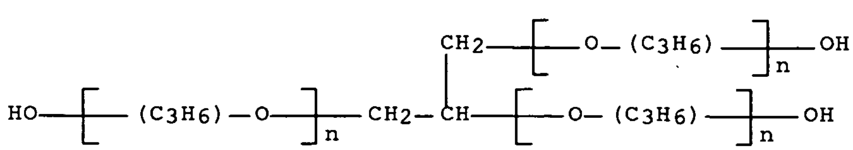
CM 1

CRN 91825-07-9
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

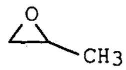
CM 2

CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS



CM 3

CRN 75-56-9
CMF C3 H6 O



CM 4

CRN 75-21-8
CMF C2 H4 O

L38 ANSWER 32 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:795881 HCAPLUS Full-text
DOCUMENT NUMBER: 132:36239
TITLE: Improved epoxide polymerization process reduces high-mol.-weight impurities present in ***polyether polyol*** products for polyurethane foams
INVENTOR(S): Le-Khac, Bi; Holeschovsky, Ulrich B.; Rueter, Michael A.
PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA; Lyondell Chemie Technologie Nederland B.V.
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9964493	A1	19991216	WO 1999-EP3911	19990607
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6028230	A	20000222	US 1998-92471	19980605
CA 2334027	AA	19991216	CA 1999-2334027	19990607
AU 9945082	A1	19991230	AU 1999-45082	19990607

EP 1091994	A1	20010418	EP 1999-927896		19990607
EP 1091994	B1	20030502			
R: BE, DE, ES, FR, GB, IT, NL, PT, RO					
BR 9911620	A	20011002	BR 1999-11620		19990607
JP 2002517578	T2	20020618	JP 2000-553494		19990607
CN 1110511	B	20030604	CN 1999-807060		19990607
PT 1091994	T	20030829	PT 1999-927896		19990607
ES 2198919	T3	20040201	ES 1999-927896		19990607
PRIORITY APPLN. INFO.:			US 1998-92471	A	19980605
			WO 1999-EP3911	W	19990607

AB The amount of high mol. weight impurity present in a ***polyether polyol*** produced by alkoxylation of an active hydrogen-containing initiator using an epoxide such as propylene oxide and a substantially amorphous highly active double metal cyanide complex catalyst may be advantageously lowered by having a non-protic Lewis acid present during the epoxide polymerization The use of halides such as zinc chloride and aluminum chloride is especially effective for such purposes. The presence of minor amts. of water during polymerization seems to greatly increase the efficiency of the Lewis acid and also to improve the reproducibility of the results obtained. The higher purity ***polyether polyols*** produced are particularly useful in the preparation of slab and molded polyurethane foams, which tend to collapse or become excessively tight when elevated levels of high mol. tail are present in the ***polyether polyol***. Thus, propylene oxide was polymerized using a trifunctional ***polyether polyol*** having a hydroxy number of 240 mg KOH/g as the starter and a double metal cyanide complex catalyst consisting of zinc hexacyanocobaltate, tert-Bu alc., zinc chloride and polyether. The ***polyether polyol*** products passed the Supercrit. Foam Test with a settle (collapse) much greater than that of a control ***polyether polyol*** prepared using a KOH catalyst when 5-10 ppm addnl. zinc chloride and 10 ppm water were added to the polymerization reaction mixture A significant reduction is observed in the level of impurities having mol. weight >200,000, which are believed to be primarily responsible for causing foam collapse.

IC ICM C08G065-26
ICS C08G065-10; B01J027-26

CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38

ST epoxide polymn ***polyether polyol***; polyoxyalkylene alkoxylation epoxide; polyoxypropylene triol polyurethane foam

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(improved epoxide polymerization process reduces high-mol.-weight impurities present in ***polyether polyols*** for slab and molded polyurethane foam applications)

IT Polymerization
(ring-opening; improved epoxide polymerization process reduces high-mol.-weight impurities present in ***polyether polyols*** for slab and molded polyurethane foam applications)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PREP (Preparation); PROC (Process)
(triol derivs.; improved epoxide polymerization process reduces high-mol.-weight impurities present in ***polyether polyols*** for slab and molded polyurethane foam applications)

IT 26471-62-5DP, TDI, polymers with polyoxypropylene triol
RL: IMF (Industrial manufacture); PREP (Preparation)
(improved epoxide polymerization process reduces high-mol.-weight impurities

present in ***polyether polyols*** for slab and molded
polyurethane foam applications)

IT 25322-69-4DP, triol derivs.
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PREP (Preparation); PROC (Process)
(improved epoxide polymerization process reduces high-mol.-weight impurities
present in ***polyether polyols*** for slab and molded
polyurethane foam applications)

IT 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(improved epoxide polymerization process reduces high-mol.-weight impurities
present in ***polyether polyols*** for slab and molded
polyurethane foam applications)

IT 75-65-0, tert-Butyl alcohol, uses 7429-90-5D, Aluminum, halides, uses 7439-89-6D, Iron, halides, uses 7439-96-5D, Manganese, halides, uses ***7440-48-4D,*** Cobalt, halides, uses ***7440-66-6D,*** Zinc, halides, uses 7446-70-0, Aluminum chloride, uses ***7646-85-7,*** Zinc chloride, uses ***7733-02-0,*** Zinc sulfate ***7779-88-6,*** Zinc nitrate ***14049-79-7,*** Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use);*** USES (Uses)
(polymerization catalyst; improved epoxide polymerization process reduces high-mol.-weight impurities present in ***polyether polyols*** for slab and molded polyurethane foam applications)

IT ***7440-48-4D,*** Cobalt, halides, uses ***7440-66-6D,*** Zinc, halides, uses ***7646-85-7,*** Zinc chloride, uses ***7733-02-0***
, Zinc sulfate ***7779-88-6,*** Zinc nitrate ***14049-79-7,***
Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use);*** USES (Uses)
(polymerization catalyst; improved epoxide polymerization process reduces high-mol.-weight impurities present in ***polyether polyols*** for slab and molded polyurethane foam applications)

RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

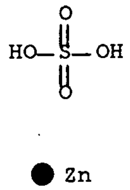
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

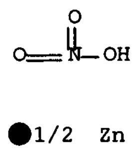
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

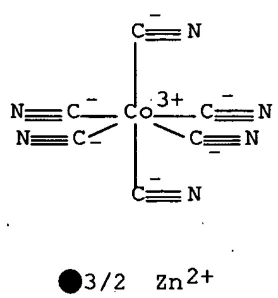
RN 7733-02-0 HCAPLUS
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 33 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:753144 HCAPLUS Full-text
DOCUMENT NUMBER: 132:3598
TITLE: Double metal cyanide catalysts containing cyclic, bidentate complexing agents
INVENTOR(S): Le-Khac, Bi; Wang, Wei; Faraj, Mahmoud K.
PATENT ASSIGNEE(S): Arco Chemical Technology L.P., USA; Lyondell Chemie Technologie Nederland B.V.
SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9959719	A1	19991125	WO 1999-EP3147		19990507
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
US 6013596	A	20000111	US 1998-80780		19980518
CA 2332599	AA	19991125	CA 1999-2332599		19990507
AU 9941401	A1	19991206	AU 1999-41401		19990507
BR 9910605	A	20010116	BR 1999-10605		19990507
EP 1094895	A1	20010502	EP 1999-924904		19990507
EP 1094895	B1	20040204			
R: BE, DE, ES, FR, GB, IT, NL, PT, RO					
JP 2002515517	T2	20020528	JP 2000-549376		19990507
CN 1121273	B	20030917	CN 1999-808800		19990507
PT 1094895	T	20040531	PT 1999-924904		19990507
ES 2214855	T3	20040916	ES 1999-924904		19990507
TW 460324	B	20011021	TW 1999-88107966		19990517
HK 1039910	A1	20040716	HK 2002-101287		20020221
PRIORITY APPLN. INFO.:			US 1998-80780	A	19980518
			US 1998-80780P	P	19980518
			WO 1999-EP3147	W	19990507

AB When double metal cyanide (DMC) catalysts are prepared with a complexing agent comprising a mixture of a C3-5 aliphatic alc. and a cyclic bidentate compound selected from lactams and lactones, and, optionally, a functionalized polymer, ***polyether polyols*** produced with the catalysts contain reduced levels of high-mol.-weight polyol components as compared to those produced with conventional DMC catalysts. The ***polyether polyol*** products consistently perform better in urethane applications such as flexible and molded foams. Thus, a substantially noncryst. zinc hexacyanocobaltate (I) catalyst was prepared by treating an aqueous ZnCl2 solution with an aqueous potassium hexacyanocobaltate solution in the presence of tert-Bu alc. and 1-(2-hydroxyethyl)-2-pyrrolidone as the complexing agent components and polypropylene glycol as the functionalized polymer. Propylene oxide was added to an activated mixture containing I and a propoxylated glycerin starter. The polyoxypropylene triol produced contained no polyol component with a number-average mol. weight greater than .apprx.400,000 and passed the supercrit. foam test (a sensitive test designed to reveal whether or not polyols will cause foam settling or collapse in the field).

IC ICM B01J027-26
ICS B01J031-02; C08G065-10

CC 35-3 (Chemistry of Synthetic High Polymers)

ST double metal cyanide catalyst ***polyether polyol;*** polyoxyalkylene double metal cyanide complex catalyst; alkylene oxide polymn metal cyanide catalyst

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(double metal cyanide complex catalysts containing alc. and cyclic

bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyol*** manufacture)

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyols*** for manufacture of)

IT Polymerization catalysts
(double metal cyanide complexes; double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyol*** manufacture)

IT Polyoxyalkylenes, uses
RL: NUU (Other use, unclassified); USES (Uses)
(in preparation of double metal cyanide complex catalysts containing alc. and
cyclic bidentate complexing agents for minimizing formation of high-mol. weight products in ***polyether polyol*** production)

IT 75-65-0, tert-Butyl alcohol, uses 96-48-0, γ-Butyrolactone 105-60-2, ε-Caprolactam, uses 502-44-3, ε-Caprolactone 616-45-5, 2-Pyrrolidone 675-20-7, δ-Valerolactam 872-50-4, N-Methyl-2-pyrrolidone, uses 2687-91-4 3445-11-2, 1-(2-Hydroxyethyl)-2-pyrrolidone 59776-88-4
RL: MOA (Modifier or additive use); USES (Uses)
(complexing agent; double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyol*** production)

IT 25791-96-2P, Polypropylene glycol ether with glycerol
RL: IMF (Industrial manufacture); PREP (Preparation)
(double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyol*** manufacture)

IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyol*** production)

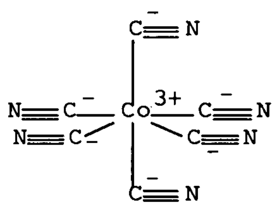
IT ***39279-01-1P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyols*** for manufacture of)

IT 9003-39-8, Poly(vinylpyrrolidone) 25322-69-4, Polypropylene glycol
RL: NUU (Other use, unclassified); USES (Uses)
(in preparation of double metal cyanide complex catalysts containing alc. and
cyclic bidentate complexing agents for minimizing formation of high-mol. weight products in ***polyether polyol*** production)

IT 7646-85-7, Zinc chloride, reactions 13963-58-1, Potassium hexacyanocobaltate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; in preparation of double metal cyanide complex catalysts for ***polyether polyol*** production)

IT ***14049-79-7P***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight

products in ***polyether polyol*** production)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)

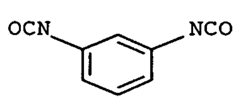


●3/2 Zn^{2+}

IT ***39279-01-1P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(double metal cyanide complex catalysts containing alc. and cyclic bidentate complexing agents minimize formation of high-mol. weight products in ***polyether polyols*** for manufacture of)
RN 39279-01-1 HCAPLUS
CN Poly[oxy(methyl-1,2-ethanediyl)], α,α',α''-1,2,3-propanetriyltris[ω-hydroxy-, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

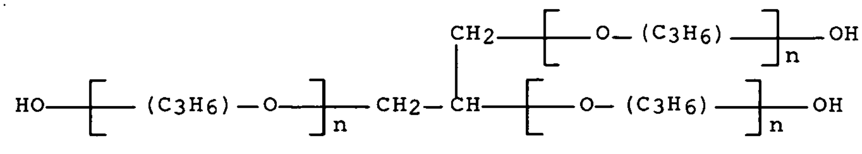
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

CM 2

CRN 25791-96-2
CMF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C3 H8 O3
CCI IDS, PMS



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT.

L38 ANSWER 34 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:308664 HCAPLUS Full-text
DOCUMENT NUMBER: 130:338567
TITLE: Manufacture of partially crystalline ***polyether polyols***
INVENTOR(S): Schaefer, Walter; Hofmann, Joerg; Gupta, Pramod; Mueller, Hanns-Peter; Pielartzik, Harald
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 5 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 19748359	A1	19990506	DE 1997-19748359		19971103
CA 2308168	AA	19990514	CA 1998-2308168		19981021
WO 9923135	A1	19990514	WO 1998-EP6689		19981021
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
AU 9914858	A1	19990524	AU 1999-14858		19981021
EP 1028990	A1	20000823	EP 1998-958860		19981021
EP 1028990	B1	20040107			
R: BE, DE, ES, FR, GB, IT, NL					
BR 9814110	A	20001003	BR 1998-14110		19981021
JP 2001521957	T2	20011113	JP 2000-519004		19981021
CN 1116335	B	20030730	CN 1998-810796		19981021
ES 2212381	T3	20040716	ES 1998-958860		19981021
TW 486494	B	20020511	TW 1998-87118009		19981030
MX 200003991	A	20001110	MX 2000-3991		20000425
US 6458918	B1	20021001	US 2000-530304		20000427
HK 1033834	A1	20040416	HK 2001-104361		20010622
PRIORITY APPLN. INFO.:			DE 1997-19748359	A	19971103
			WO 1998-EP6689	W	19981021

OTHER SOURCE(S): MARPAT 130:338567

AB A partially crystalline ***polyether polyol*** with number-average mol. weight (Mn) 500-100,000 and isotactic ***triad*** content >35%, useful in the manufacture of polyurethanes, is prepared by polymerization of an alkylene oxide initiated by Q[(OCH2CHR1)l(OCH2CHR2)nOH]y [Q = C2-20 alkane residue; R1, R2 = H, C1-20 hydrocarbyl; l, n = 0-40; y = 2-6] in the presence of (RO)xM2OM1OM2(OR)x (M1 =

Zn, Co, Mo, Fe, Cr, Mn; M2 = Al, Ti; R = C1-10 alkyl; x = 2, 3) as catalyst. Thus, reaction of Zn(OAc)2 with Al(OPr-iso)3 in refluxing Decalin with distillation of iso-PrOAc gave a 0.35M solution of (iso-PrO)2AlOZnOAl(OPr-iso)2 (I). Heating 1.3 g I in 100 g polypropylene glycol (OH number 112 mg KOH/g) for 6 h at 130°/0.2 millibar with addition of toluene and polymerization of propylene oxide therewith at 130-140°/3 bars gave a waxy ***polyether polyol*** with OH number 20 mg KOH/g, isotactic ***triad*** content 64%, and Mn 5900, which showed a crystalline phase m.p. of 55°.

IC ICM C08G065-06
ICS C08G065-22; C08G018-48; B01J031-02; C07C031-32; C07F007-28
ICA C08G065-10
CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 67
IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of partially crystalline ***polyether polyols***)
IT Polyurethanes, preparation
RL: PNU (Preparation, unclassified); PREP (Preparation)
(polyoxyalkylene-; manufacture of partially crystalline ***polyether polyols*** for use in manufacture of)
IT Polymerization catalysts
(ring-opening, bimetallic μ-oxo alkoxides; manufacture of partially crystalline ***polyether polyols***)
IT 25322-69-4P, Polypropylene glycol 25723-16-4P, Polypropylene glycol trimethylolpropane ether 52625-13-5P, Polypropylene glycol sorbitol ether 106392-12-5P, Ethylene oxide-propylene oxide block copolymer
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of partially crystalline ***polyether polyols***)
IT 36900-81-9P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(polymerization catalyst; manufacture of partially crystalline ***polyether polyols***)

L38 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:785702 HCAPLUS Full-text
DOCUMENT NUMBER: 130:39134
TITLE: Rapid activation of double metal cyanide catalysts in polyol manufacture
INVENTOR(S): Hayes, John E.; Langsdorf, Leah J.; Isaacs, Bruce H.; Armellini, Fred J.
PATENT ASSIGNEE(S): Arco Chemical Technology Lp, USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5844070	A	19981201	US 1997-857998	19970516
CA 2287247	AA	19981126	CA 1998-2287247	19980409
WO 9852689	A1	19981126	WO 1998-EP2098	19980409

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,

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          FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
          CM, GA, GN, ML, MR, NE, SN, TD, TG
     AU 9876427            A1     19981211    AU 1998-76427          19980409
     EP 981407             A1     20000301    EP 1998-924108         19980409
     EP 981407             B1     20030319
     EP 981407             B2     20061011
         R:  BE, DE, ES, FR, GB, IT, NL, SE
     BR 9809835            A      20000620    BR 1998-9835           19980409
     JP 2001525878         T2     20011211    JP 1998-549846         19980409
     CN 1115196            B      20030723    CN 1998-805078         19980409
     ES 2195341            T3     20031201    ES 1998-924108         19980409
     TW 530070             B      20030501    TW 1998-87107580       19980515
PRIORITY APPLN. INFO.:                        US 1997-857998      A  19970516
                                              WO 1998-EP2098      W  19980409
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AB A polyol starter or starter/catalyst mixture is heated under vacuum under conditions effective to achieve improved stripping compared with conventional vacuum stripping, the conditions being coupling vacuum stripping with inert gas, such as CO2, sparging or stripping in the presence of an organic solvent such as ethers. Rapid activation makes process start-ups reliable and reduces cycle time, gives polyols with lower viscosity, lower polydispersity, and lower unsatn. for improved polyurethane foams.

IC ICM C08F006-00
ICS C08G059-68; C08G065-04; C08J003-00

INCL 528501000

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 35, 38

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(***polyether-***, foams; ***polyol*** precursor manufacture using rapid activation of double metal cyanide catalysts by polyol vacuum stripping and inert gas sparging or with addition organic solvent)

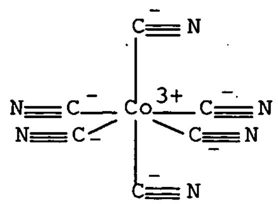
IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(complex; polyol precursor manufacture using rapid activation of double metal cyanide catalysts by polyol vacuum stripping and inert gas sparging or with addition organic solvent)

IT 26471-62-5DP, TDI, polymer with ***polyether polyols***
RL: IMF (Industrial manufacture); PREP (Preparation)
(***polyol*** precursor manufacture using rapid activation of double metal cyanide catalysts by polyol vacuum stripping and inert gas sparging or with addition organic solvent)

IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(complex; polyol precursor manufacture using rapid activation of double metal cyanide catalysts by polyol vacuum stripping and inert gas sparging or with addition organic solvent)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

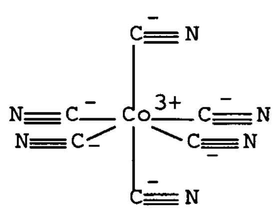
L38 ANSWER 36 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:457038 HCAPLUS Full-text
DOCUMENT NUMBER: 127:66340
TITLE: Process for the preparation of polyol polymer dispersions
INVENTOR(S): Simroth, Donald W.; Zhou, Xinhua; Rose, Charles V.
PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 776922	A1	19970604	EP 1996-308683		19961129
EP 776922	B1	20020313			
R: AT, BE, DE, DK, ES, FR, GB, GR, IE, IT, NL, SE					
US 5688861	A	19971118	US 1995-565516		19951130
CA 2188965	AA	19970531	CA 1996-2188965		19961028
JP 09157385	A2	19970617	JP 1996-303472		19961030
TW 430676	B	20010421	TW 1996-85114249		19961120
ZA 9609938	A	19970623	ZA 1996-9938		19961127
AU 9674043	A1	19970605	AU 1996-74043		19961128
AU 722568	B2	20000803			
BR 9605748	A	19980825	BR 1996-5748		19961128
CN 1156731	A	19970813	CN 1996-118548		19961129
CN 1089773	B	20020828			
SG 81905	A1	20010724	SG 1996-11465		19961129
AT 214404	E	20020315	AT 1996-308683		19961129
ES 2173258	T3	20021016	ES 1996-308683		19961129
US 5955534	A	19990921	US 1997-915101		19970820
US 6143802	A	20001107	US 1999-312046		19990514
CN 1396190	A	20030212	CN 2002-102793		20020205
PRIORITY APPLN. INFO.:			US 1995-565516	A	19951130
			US 1997-915101	A3	19970820

AB Polymer polyols and polymer-modified polyols having substantially no transition metal content in the polyol continuous phase are prepared from encapsulative double metal cyanide complex (e.g., Zn hexacyanocobaltate)-catalyzed polyoxyalkylene ***polyether*** base ***polyols*** [e.g., poly(propylene oxide)] without substantial removal of double metal cyanide complex catalyst residues

from the base polyols and subsequent in situ polymerization of one or more polymerizable monomers.

IC ICM C08G065-10
ICS C08G018-48
CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 67
IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(process for the preparation of polyol polymer dispersions)
IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(polymerization catalysts; process for the preparation of polyol polymer dispersions)
IT ***14049-79-7***, Zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; USES (Uses)
(polymerization catalysts; process for the preparation of polyol polymer dispersions)
RN 14049-79-7 HCAPLUS
CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

L38 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:259675 HCAPLUS Full-text
DOCUMENT NUMBER: 126:238814
TITLE: Viscosity-stable isocyanate-terminated prepolymers and polyoxyalkylene ***polyether polyols*** having improved storage stability
INVENTOR(S): Lawrey, Bruce D.; Seneker, Stephen D.; Barksby, Nigel
PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 759450	A2	19970226	EP 1996-305838	19960808
EP 759450	A3	19971001		
EP 759450	B1	20021023		
R: AT, BE, DE, DK, ES, FR, GB, GR, IE, IT, NL, SE				
US 5811829	A	19980922	US 1995-513264	19950810

JP 09132630	A2	19970520	JP 1996-216948	19960731
TW 440573	B	20010616	TW 1996-85109436	19960805
CA 2182910	AA	19970211	CA 1996-2182910	19960808
AT 226602	E	20021115	AT 1996-305838	19960808
ES 2185751	T3	20030501	ES 1996-305838	19960808
RO 120262	B1	20051130	RO 1996-1622	19960808
AU 9662014	A1	19970213	AU 1996-62014	19960809
AU 702431	B2	19990218		
BR 9603364	A	19980512	BR 1996-3364	19960809
HU 218734	B	20001128	HU 1996-2195	19960809
CN 1151996	A	19970618	CN 1996-113318	19960810
CN 1092678	B	20021016		
ZA 9606792	A	19970212	ZA 1996-6792	19960812
US 5919888	A	19990706	US 1998-88275	19980601
US 6036879	A	20000314	US 1999-246495	19990209
CN 1397578	A	20030219	CN 2002-107366	20020315
CN 1397576	A	20030219	CN 2002-107367	20020315
HK 1051699	A1	20050527	HK 2003-103986	20030605
HK 1051700	A1	20050527	HK 2003-104016	20030606
PRIORITY APPLN. INFO.:			US 1995-513264	A 19950810
			US 1998-88275	A3 19980601

AB Polyalkylene polyols containing double metal cyanide complexes or residues thereof as are produced during the preparation of ***polyoxyalkylene polyols*** by the double metal cyanide complex catalyzed oxyalkylation of a suitably functional hydric initiator are stable without catalyst removal (i.e., the product contains 10-1000 ppm catalyst or catalyst residue). Isocyanate-terminated prepolymers prepare from such polyols are surprisingly viscosity-stable relative to similar prepolymers prepared from polyols not containing double metal cyanide complexes or residues thereof. A typical polyol was manufactured by polymerization of propylene oxide with polypropylene glycol in the presence of tert-BuOH-Zn hexacyanocobaltate complex at 105°.

IC ICM C08G018-48
ICS C08G018-10; C08G065-26; C08G065-10; C08L071-02

CC 35-3 (Chemistry of Synthetic High Polymers)

IT Polymerization catalysts
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

IT Polyoxyalkylenes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

IT ***Polyurethanes, preparation***
RL: IMF (Industrial manufacture); PREP (Preparation)
(polyoxyalkylene-; manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

IT 67-63-0D, Isopropanol, complexes with double metal cyanides
RL: CAT (Catalyst use); USES (Uses)
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

IT 75-65-0DP, tert-Butyl alcohol, complexes with zinc hexacyanocobaltate
110-71-4DP, Glyme, complexes with zinc hexacyanocobaltate
14049-79-7DP, Zinc hexacyanocobaltate, complexes 25322-69-4DP,

Polypropylene glycol, complexes with zinc hexacyanocobaltate
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

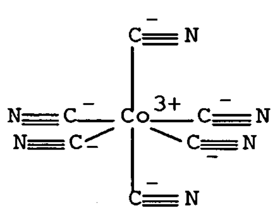
IT ***9048-57-1P***, Diphenylmethane 4,4'-diisocyanate-polypropylene glycol copolymer ***168269-80-5P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

IT 25322-69-4P, Polypropylene glycol
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

IT ***14049-79-7DP***, Zinc hexacyanocobaltate, complexes
RL: ***CAT (Catalyst use)***; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

RN 14049-79-7 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (2:3), (OC-6-11)- (9CI) (CA INDEX NAME)



●3/2 Zn^{2+}

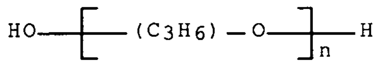
IT ***9048-57-1P***, Diphenylmethane 4,4'-diisocyanate-polypropylene glycol copolymer ***168269-80-5P***
RL: ***IMF (Industrial manufacture); PREP (Preparation)***
(manufacture of polyoxyalkylene ***polyether polyols*** having improved storage stability in presence of double metal cyanide complexes for preparation of viscosity-stable isocyanate-terminated prepolymers)

RN 9048-57-1 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

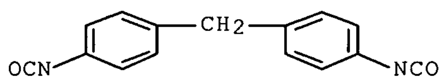
CM 1

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



CM 2

CRN 101-68-8
CMF C15 H10 N2 O2



RN 168269-80-5 HCAPLUS
CN Poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-hydroxy-, polymer with Mondur M (9CI) (CA INDEX NAME)

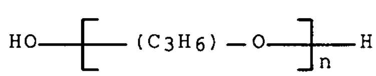
CM 1

CRN 91932-35-3
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



L38 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:169165 HCAPLUS Full-text
DOCUMENT NUMBER: 126:239430
TITLE: Double metal cyanide-catalyzed polyoxyethylene-polyoxypropylene random polyols useful in flexible high-resilience foams with reduced shrinkage
INVENTOR(S): Hager, Stanley L.

PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA
SOURCE: U.S., 12 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5605939	A	19970225	US 1996-592087	19960126
US 5648559	A	19970715	US 1996-734561	19961021
CA 2241627	AA	19970731	CA 1997-2241627	19970123
CA 2241627	C	20060829		
WO 9727236	A1	19970731	WO 1997-EP306	19970123

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AU 9715448	A1	19970820	AU 1997-15448	19970123
EP 876416	A1	19981111	EP 1997-901596	19970123
EP 876416	B1	19990811		

R: BE, DE, ES, FR, GB, IT, NL, SE

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1209820	A	19990303	CN 1997-191859	19970123
CN 1114640	B	20030716		
BR 9706974	A	19990406	BR 1997-6974	19970123
ES 2135287	T3	19991016	ES 1997-901596	19970123
JP 2000517347	T2	20001226	JP 1997-526542	19970123
TW 440577	B	20010616	TW 1997-86100729	19970123

PRIORITY APPLN. INFO.: US 1996-592087 A3 19960126
WO 1997-EP306 W 19970123

AB The title foams are prepared from polyols catalyzed with double metal cyanide complexes, e.g., zinc hexacyanocobaltate, which offer high catalytic activity and easy removal by simple filtration. The polyol component comprises a ***polyoxyalkylene polyol*** containing ≥20% of ≥1 polyoxyethylene-polyoxypropylene random polyols with an unsatn. of ≤0.02 mequiv/g. The polyol has a functionality of ≥2, prepared at least in part by the cyanide complex, and contains ≤35% of an all oxypropylene block catalyzed by the cyanide; and has ≥1 random external blocks prepared by oxyalkylation of ≥2% ethylene oxide with propylene oxide.

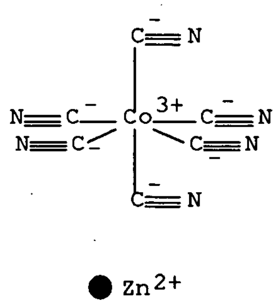
IC ICM C08G018-62
INCL 521137000
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 67
IT ***27071-03-0***
RL: ***CAT (Catalyst use)***; USES (Uses)
(double metal cyanide-catalyzed polyoxyethylene-polyoxypropylene polyols for flexible high-resilience foams with reduced shrinkage)
IT 50-70-4DP, D-Glucitol, ***polyoxyalkylene polyols***, polymers with TDI, uses 56-81-5DP, 1,2,3-Propanetriol, ***polyoxyalkylene polyols***, polymers with TDI, uses
9003-11-6DP, Ethylene oxide-propylene oxide copolymer, polyols, polymers with TDI 26471-62-5DP, TDI, polymers with polyoxyethylene-polyoxypropylene polyols ***188570-64-1P***
RL: ***IMF (Industrial manufacture)***; PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation)***; USES

(Uses)
(foams; double metal cyanide-catalyzed polyoxyethylene-polyoxypropylene polyols for flexible high-resilience foams with reduced shrinkage)

IT ***27071-03-0***
RL: ***CAT (Catalyst use)***; USES (Uses)
(double metal cyanide-catalyzed polyoxyethylene-polyoxypropylene polyols for flexible high-resilience foams with reduced shrinkage)

RN 27071-03-0 HCAPLUS

CN Cobaltate(3-), hexakis(cyano-κC)-, zinc (1:1), (OC-6-11)- (9CI) (CA INDEX NAME)



IT ***188570-64-1P***
RL: ***IMF (Industrial manufacture)***; PRP (Properties); TEM (Technical or engineered material use); ***PREP (Preparation)***; USES (Uses)
(foams; double metal cyanide-catalyzed polyoxyethylene-polyoxypropylene polyols for flexible high-resilience foams with reduced shrinkage)

RN 188570-64-1 HCAPLUS

CN Oxirane, methyl-, polymer with 1,3-diisocyanatomethylbenzene, methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1), oxirane and α,α',α''-1,2,3-propanetriyltris[ω-hydroxypoly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

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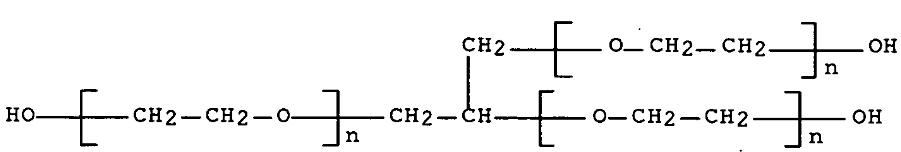
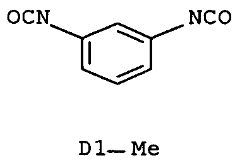
CRN 31694-55-0
CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C3 H8 O3
CCI PMS



CM 2

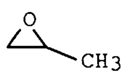
CRN 26471-62-5
CMF C9 H6 N2 O2

CCI IDS



CM 3

CRN 75-56-9
CMF C3 H6 O



CM 4

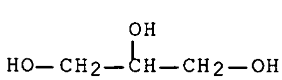
CRN 75-21-8
CMF C2 H4 O

CM 5

CRN 9082-00-2
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x

CM 6

CRN 56-81-5
CMF C3 H8 O3



CM 7

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CRN  9003-11-6
CMF  (C3 H6 O . C2 H4 O)x
CCI  PMS

     CM   8

     CRN  75-56-9
     CMF  C3 H6 O
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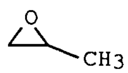

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     CM   9

     CRN  75-21-8
     CMF  C2 H4 O
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INVENTOR SEARCH

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L31          29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L28 AND (L29 OR L30)) OR
                (L29 AND L30)
L32        5420 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L28 OR L29 OR L30)
L33           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND POLYETHER AND POLYOL
L34           9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND SYNDIOTAC?
L35           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND TRIAD
L36           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND STEREOREG?
L37          50 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31 OR (L33 OR L34 OR L35 OR
                L36)


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L37  ANSWER 1 OF 50  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:966181  HCAPLUS  Full-text
TITLE:                    Polymerization of methyl methacrylate with nickel
                          α-diimine catalysts: effect of the methyl
```

position in the ligand
AUTHOR(S): ***Kim, Il***; Kim, Jae Sung; Ha, Chang-Sik; Park, Dae-Won
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Proceedings - KORUS 2004, Korea-Russia International Symposium on Science and Technology, 8th, Tomsk, Russian Federation, June 26-July 3, 2004 (2004), Volume 2, 36-39. Institute of Electrical and Electronics Engineers: New York, N. Y.
CODEN: 69ILJH; ISBN: 0-7803-8383-4
DOCUMENT TYPE: Conference
LANGUAGE: English

AB In the solution polymns. of Me methacrylate with (α- diimine)nickel(II)/methyl aluminoxane (MAO), we observed effects of the position of two Me substituents in the ligand on both the activities of the catalysts and the polymer microstructure. α-Diimine nickel(II) catalysts gave ***syndiotactic***-rich poly(Me methacrylate) with high mol. weight and narrow mol. weight distribution.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 2 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:907065 HCAPLUS Full-text
TITLE: Low cost piezoelectric magnetic composition with enhanced piezoelectric characteristics for stack type piezoelectric actuator
INVENTOR(S): Jeong, Soon Jong; ***Kim, Il Won***; Koh, Hung Hyuk; Kwon, Jeong Ho; Lee, Jae Shin; ***Lee, Sang Hyun***; Song, Jae Sung
PATENT ASSIGNEE(S): Korea Electro Technology Research Institute, S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2005046166	A	20050518	KR 2003-80181	20031113
PRIORITY APPLN. INFO.:			KR 2003-80181	20031113

AB A piezoelec. magnetic composition for a stack type piezoelec. actuator is provided to obtain excellent piezoelec. characteristics from even a sintering temperature range of 950 or less, to economize fabrication costs and to reduce environmental contamination. A piezoelec. magnetic composition is represented as a compositional formula of Pb[(ZrbTi1- b)x(Mg1/3Nb2/3)y(Fe1/2Nb1/2)z]O3 + a weight%Li2O. The piezoelec. magnetic composition is synthesized with a variety of perovskite powders with a stable ABO3 structure. The perovskite powders are made of Pb(Mg1/3Nb2/3)O3, Pb(ZrbTi1-b)O3, Pb(Fe1/2Nb1/2)O3, resp.

L37 ANSWER 3 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:859939 HCAPLUS Full-text
TITLE: Effect of ionic liquids on ring-opening polymerization of propylene oxide with double metal cyanide catalysts
AUTHOR(S): ***Kim, Il***; Baek, Seung Tae; Anas, K.; Park, Dae Won; Ha, Chang Sik
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Busan 609-735, S. Korea
SOURCE: Abstracts of Papers, 232nd ACS National Meeting, San

Francisco, CA, United States, Sept. 10-14, 2006 (2006), FUEL-259. American Chemical Society: Washington, D. C.
CODEN: 69IHRD

DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)
LANGUAGE: English

AB Double metal cyanide (DMC) catalysts prepared by reacting ZnCl2 and K3[Co(CN)6]2 in aqueous solution in the presence of complexing agents, are very efficient catalysts for ring-opening polymerization of propylene oxide (PO) resulting ***polyether polyols*** showing enhanced properties. While the DMC catalysts offer significant advantages, unlike conventional KOH catalyst, they must normally be activated before the epoxide monomer can be added. Long initiation time (induction period), say several hour, increases cycle time, which undercuts the economic advantage of faster polymns. In addition, heating the catalyst for a prolonged period at high temperature above 100 °C can reduce its activity or deactivate it completely. In order to overcome this disadvantage, we combined the DMC catalyst with various ionic liqs. Since ionic liqs. are composed of anions and cations, either of which may interact with the reactants and therefore affect the outcome of the reaction. We demonstrate that the polymerization reactions by DMC catalyst combined with small amount (1 mmol) of ionic liquid exhibit a very short induction period (several minutes). While the reaction rate of the DMC catalyst in the absence of ionic liqs. decreased gradually as the amount of monomer added increased due to the deactivation of the active sites, no such deactivation was observed if ionic liqs. are used as a promoter. Plausible mechanisms are proposed for the ionic liquid assisted polymerization of PO by DMC catalyst.

L37 ANSWER 4 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1056040 HCAPLUS Full-text
DOCUMENT NUMBER: 143:478267
TITLE: Ring-opening polymerizations of propylene oxide by double metal cyanide catalysts prepared with ZnX2 (X = F, Cl, Br, or I)
AUTHOR(S): ***Kim, Il***; Byun, Seung Hoon; Ha, Chang-Sik
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Geumjeong-gu, 609-735, S. Korea
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2005), 43(19), 4393-4404
CODEN: JPACEC; ISSN: 0887-624X
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polymns. of propylene oxide were carried out with double metal cyanide (DMC) catalysts based on Zn3[Co(CN)6]2. Through the control of the type and amount of ZnX2 (X = F, Cl, Br, or I) during the preparation of the catalyst, the catalytic activity, induction period, and unsatn. level in the ***polyether polyols*** could be tuned. The DMC catalysts were characterized by XPS, IR spectroscopy, and x-ray powder diffraction. In general, ZnBr2 was the most effective zinc halide with respect to the properties of the resulting polymers as well as the activity and induction period. The average rates of polymns. of DMC catalysts prepared with ZnCl2, ZnBr2, and ZnI2 were 889, 1667, and 784 g of polyoxypropylene/g of catalyst h, resp., with induction periods of about 53, 5, and 60 min, resp., at 115 °C. The DMC catalysts produced polyoxypropylenes with an ultralow unsatn. level (0.0025-0.0057 mequiv/g) and a narrow mol. weight distribution (1.07-1.42) without high-mol.-weight tails; this resulted in a low viscosity (962-3950 cP). According to the results collected from catalyst characterizations and polymns., the active sites of DMC-catalyzed polymerization had mainly coordinative characters. The presence

of free anions accelerated the ring-opening procedure and thus enhanced the propagation rate and shortened the induction period.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 5 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:698405 HCAPLUS Full-text
DOCUMENT NUMBER: 143:154244
TITLE: ***Polyether polyol*** having ***stereoregularity*** and method of preparing the same
INVENTOR(S): ***Kim, Il; Lee, Sang Hyun; An, Jun Tai***
PATENT ASSIGNEE(S): SKC Inc., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2005171319	A1	20050804	US 2004-828800		20040422
KR 2005078969	A	20050808	KR 2004-7102		20040203
PRIORITY APPLN. INFO.:			KR 2004-7102	A	20040203

AB Disclosed is ***polyether polyol*** for use in production of polyurethane, characterized in that ***polyether polyol*** carbons have ***stereoregularity*** of ***syndiotactic triad***. Further, a method of preparing such ***polyether polyol*** is provided wherein an epoxy compound is polymerized in the presence of a double metal cyanide catalyst prepared by reaction of ZnCl2, tert-BuOH, K hexacyanocobaltate, and polytetrahydrofuran. Therefore, polyurethane resulting from ***stereoregular polyether polyol*** is superior in phys. properties to polyurethanes obtained by use of atactic ***polyether polyols***.

L37 ANSWER 6 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:674169 HCAPLUS Full-text
DOCUMENT NUMBER: 144:10618
TITLE: Use of fouling resistant nanofiltration and reverse osmosis membranes for dyeing wastewater effluent treatment
AUTHOR(S): Myung, S.-W.; Choi, I.-H.; ***Lee, S.-H.; Kim, I.-C.***; Lee, K.-H.
CORPORATE SOURCE: Membrane and Separation Research Center, Korea Research Institute of Chemical Technology, Taejon, 305-606, S. Korea
SOURCE: Water Science and Technology (2005), 51(6-7, Water Environment--Membrane Technology), 159-164
CODEN: WSTED4; ISSN: 0273-1223
PUBLISHER: IWA Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Dyeing wastewater was post-treated by using nanofiltration (NF) and reverse osmosis (RO) membranes. To reduce membrane fouling, poly (vinyl alc.) (PVA) with a neutral charge was coated on NF and RO membranes. The effect of surface charge and surface roughness on membrane fouling was investigated. Dyeing wastewater was pre-treated by using coagulation, activated sludge process, and MF process to investigate the effect of the pre-treatment on the membrane fouling. It is demonstrated that the extent of fouling is

significantly influenced by the surface roughness and the surface charge on the NF and RO membranes. A membrane with a smooth and neutral surface was fouled less. The pre-treatment was essential for avoiding NF and RO membranes fouling. The quality of the final permeate was acceptable for water reuse.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 7 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:329245 HCAPLUS Full-text
DOCUMENT NUMBER: 144:77867
TITLE: Development and characteristics of a 25-in. XGA PDP using LTCC-M technology
AUTHOR(S): Mun, J. D.; ***Kim, I. T.***; Cho, C. R.; Hwang, K. T.; Moon, S. J.; Boo, K. H.; Moon, G. J.; ***Lee, S. H.***; Kwon, Y. H.; Kim, M. S.; Koo, B. J.; Han, J. K.; Kong, S. S.; Kim, J. D.
CORPORATE SOURCE: Daewoo Electronics Co., Ltd, Seoul, S. Korea
SOURCE: Digest of Technical Papers - Society for Information Display International Symposium (2002), 33, 1064-1067
CODEN: DTPSDS
PUBLISHER: Society for Information Display
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English

AB 25'' XGA (165 μm pitch) PDP panel was developed using LTCC-M (Low Temperature Cofired Ceramic on Metal) technol. Simulations of optimum barrier height and gas composition for maximum power efficiency was carried out and the gas composition was determined to be 71 % He-25 % Ne-4 % Xe (in vol %) for the LTCC-M PDP panel. Some packaging issues including vacuum compatibility of LTCC-M panel are addressed and the LTCC-M panel properties are described.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 8 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:833275 HCAPLUS Full-text
DOCUMENT NUMBER: 142:262772
TITLE: Synthesis of High-performance Polyurethane Elastomers with Ultra-low Monol Content Poly(oxy propylene)
AUTHOR(S): ***Kim, Il***; Kim, Tak; Ha, Chang-Sik
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Jangjeon-dong, S. Korea
SOURCE: Molecular Crystals and Liquid Crystals (2004), 415, 35-42
CODEN: MCLCD8; ISSN: 1542-1406
PUBLISHER: Taylor & Francis, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A fundamental understanding of the unsatn. (monol) content effect in propylene oxide based ***polyether polyols***(PPG)on the properties of 4,4'-methylene diisocyanate/1,4-butanediol cured polyurethane (PU) elastomers, a series of PPG samples with different monol content from 0.035 to 0.005 meq/ were synthesized by using both KOH and double metal cyanide catalysts. The monol content contained in PPG is demonstrated to be a key factor to achieve high-performance PU elastomer. The mech. properties of low monol PPG derived PU approached to those of poly(tetramethylene ether glycol) derived PU. The narrow MWD of PPG together with low monol content results in a reduction of viscosities of both PPG and resulting PU prepolymer.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 9 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:741475 HCAPLUS Full-text
DOCUMENT NUMBER: 141:395920
TITLE: Preparation of multi-metal cyanide catalysts and ring-opening polymerization of propylene oxide
AUTHOR(S): ***Kim, Il***; Ahn, Jun-Tae; ***Lee, Sang-Hyun***; Ha, Chang-Sik; Park, Dae-Won
CORPORATE SOURCE: Division of Chemical Engineering, Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Catalysis Today (2004), 93-95, 511-516
CODEN: CATTEA; ISSN: 0920-5861
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polymns. of propylene oxide have been carried out by using double metal cyanide (DMC) catalyst prepared by reacting ZnCl2 and K3[Co(CN)6]2 in the presence of complexing agents and multi-metal cyanide (MMC) catalyst prepared by reacting ZnCl2, K3[Co(CN)6]2 and K4Fe(CN)6 in the presence of complexing agents. The catalysts were characterized by XPS, IR spectroscopy and x-ray powder diffraction. By controlling the type of complexing agent and metal, and by controlling polymerization parameters, the catalytic activity, initiation time and the unsatn. level of poly(oxypropylene) could be tuned. Both DMC and MMC catalysts showed very high activities, and the MMC catalyst showed high activity in a wide range of temperature (30-130°). The POPs obtained by the DMC catalyst and the MMC catalysts were characterized by ultra-low level of unsatn. (0.002-0.01 meq/g) and by polydispersity (MWD = 1.02-1.10). The active sites of DMC-catalyzed polymerization of propylene oxide had both cationic and coordinative characters.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 10 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:653809 HCAPLUS Full-text
DOCUMENT NUMBER: 141:314686
TITLE: Synthesis of chlorotitanium(IV) schiff-base complexes and their application to styrene polymerization
AUTHOR(S): ***Kim, Il***; Ha, Yun Sun; Zhang, Dan Feng; Ha, Chang-Sik; Lee, Uk
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Macromolecular Rapid Communications (2004), 25(14), 1319-1323
CODEN: MRCOE3; ISSN: 1022-1336
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A [TiCl2(salen)] complex and its derivs. with the formula [TiCl2(L)] [L=salen(tBu), salen(di-Me), salen(di-tBu), salen(Me)] were synthesized in high yield by reacting the Schiff-base ligands with TiCl4. [TiCl2{salen(tBu)}] and [TiCl2{salen(di-tBu)}] were characterized by single-crystal x-ray diffraction. Styrene polymns. carried out with [TiCl2(salen)] and its derivs. co-catalyzed by MAO yielded ***syndiotactic*** polystyrenes. The catalytic activity and syndiospecificity were dependent on the bulkiness of the ortho substituents in the aryl ring of ligand.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 11 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:584318 HCAPLUS Full-text
DOCUMENT NUMBER: 141:431128
TITLE: Characterization of the Cr3+ EPR center in a PbWO4

single crystal
AUTHOR(S): Yeom, T. H.; ***Lee, S. H.; Kim, I. G.*** ; Choh, S. H.; Kim, T. H.; Ro, J. H.
CORPORATE SOURCE: Department of Physics, Chongju University, Chongju, 360-764, S. Korea
SOURCE: Journal of the Korean Physical Society (2004), 44(6), 1513-1517
CODEN: JKPSDV; ISSN: 0374-4884
PUBLISHER: Korean Physical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB PbWO4 single crystals doped with the Cr3+ ion were grown in an Ar atmospheric by the Czochralski method. The ESR spectra of the Cr3+ ion were recorded with an X-band ESR spectrometer at 10 K. The spectroscopic splitting tensor g and the 2nd-order zero field splitting tensor D were determined using the effective spin Hamiltonian. The rotation patterns of the Cr3+ spectra in the crystallog. planes, together with spin-Hamiltonian parameters, showed unequivocally that the actual local site symmetry around the Cr3+ ion in PbWO4 was tetragonal. The energy levels of the ground state for an Cr3+ ion embedded in a PbWO4 crystal were calculated, and it turned out that the Cr3+ ion substitutes for the Pb2+ ion in the oxygen octahedron without nearby charge compensation.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 12 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:524393 HCAPLUS Full-text
DOCUMENT NUMBER: 141:331237
TITLE: Influence of dietary germanium biotite on egg quality and fecal noxious gas content in laying hens
AUTHOR(S): Lee, W. B.; ***Kim, I. H.***; Hong, J. W.; Kwon, O. S.; ***Lee, S. H.***; Min, B. J.; Jung, Y. K.
CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, S. Korea
SOURCE: Han'guk Kagum Hakhoechi (2003), 30(1), 61-66
CODEN: HKHAAE; ISSN: 1225-6625
PUBLISHER: Korean Society of Poultry Science
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB This study was conducted to investigate the effects of dietary germanium biotite supplementation on egg quality and fecal noxious gas content in laying hens. One hundred and forty-four 40-wk-old, ISA Brown layers were used in this experiment Dietary treatments were (1) CON(control diet), (2) GB0.5(control diet + 0.5% germanium biotite), (3) GB1.0(control diet + 1.0% germanium biotite) and (4) GB1.5 (control diet + 1.5% germanium biotite). Hen-day egg production and egg shell breaking strength were not influenced by germanium biotite supplementation. However, egg weight decrease as the level of germanium biotite supplementation increased in the diets (Cubic effect, P<0.02). Eggshell thickness, yolk color and yolk index were not influenced by germanium biotite supplementation. Serum triglyceride concentration increased as dietary germanium biotite increased (linear effect P<0.02; quadratic effect, P<0.05). Dietary supplementation of germanium biotite reduced fecal NH3-N concentration (P<0.01), propionic acid (P<0.01), butyric acid (P<0.05) and acetic acid (P<0.01) concns. in the feces. In conclusion, the results of this experiment indicated that dietary germanium biotite supplementation did not affect egg shell quality, but reduced fecal NH3-N concentration

L37 ANSWER 13 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:453091 HCAPLUS Full-text

DOCUMENT NUMBER: 141:7649
TITLE: Double metal cyanide complex catalyst for producing polyol
INVENTOR(S): ***Kim, Il; Lee, Sang-hyun***
PATENT ASSIGNEE(S): SKC Chemicals Group Co., Ltd., S. Korea
SOURCE: PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004045764	A1	20040603	WO 2002-KR2155	20021119
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002368366	A1	20040615	AU 2002-368366	20021119
CN 1515358	A	20040728	CN 2003-101061	20030109

PRIORITY APPLN. INFO.: WO 2002-KR2155 A 20021119

AB Disclosed is a double metal cyanide complex catalyst for producing polyol, which is produced by using monovalent alc. and polyvalent alc. as a complexing agent. The double metal cyanide complex catalyst has advantages in that when polyol is produced by an epoxide polymerization reaction, the amount of unsatd. polyol produced is small, catalyst activation time is short, and the production yield of polyol is increased, therefore there is no need to remove remaining catalyst from polyol after polymerization reaction. Thus, 63 g zinc chloride in 231 mL water and 42 mL tert-butanol was mixed with 6.3 g potassium hexacyanocobaltate in 84 mL water and stirred at 50°, removed solid, 2 mL tert-butanol and 7 g polytetrahydrofuran were added therein and ball-milled, 200 mL tert-butanol was added therein and stirred to give a catalyst, 0.3 g of which was mixed with 70 g polypropylene glycol glycerin ether at 95°, propylene oxide was added therein and reacted to give polyoxypropylene polyol, reaction rate 3.80 g/min, hydroxy value 46.6 mg-KOH/g, and unsatn. content 0.003 mequiv/g.

L37 ANSWER 14 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:230991 HCAPLUS Full-text
DOCUMENT NUMBER: 141:23931
TITLE: Polymerizations of methyl methacrylate with late transition metal complexes combined with MAO
AUTHOR(S): ***Kim, Il***; Hwang, Jeong-Mi; Kim, Jae-Seong; Ha, Chang-Sik; Park, Dae-Won
CORPORATE SOURCE: Division of Chemical Engineering, Pusan National University, Pusan, 609-735, S. Korea
SOURCE: PMSE Preprints (2004), 90, 491
CODEN: PPMRA9; ISSN: 1550-6703
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English

AB A series of bidentate Ni(II)-based α-diimine and tridentate Fe(II)-/Co(II)-based pyridyl bis-imine catalysts were evaluated on their efficiency in the MAO-assisted polymerization of Me methacrylate. All catalysts gave ***syndiotactic*** poly(Me methacrylate)s (PMMA), even if the structural variations of the catalyst and polymerization temperature have little influence on the microstructure of PMMA.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 15 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:10243 HCAPLUS Full-text
DOCUMENT NUMBER: 140:253962
TITLE: Polymerization of methyl methacrylate with nickel α-diimine catalysts: Effect of the methyl position in the ligand
AUTHOR(S): ***Kim, Il***; Kim, Jae-sung; Han, Byeong Heui; Ha, Chang-sik
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Macromolecular Research (2003), 11(6), 514-517
CODEN: MRAECT; ISSN: 1598-5032
PUBLISHER: Polymer Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In the solution polymns. of Me methacrylate with (α-diimine)nickel(II)/methylaluminoxane (MAO), we observed effects of the position of two Me substituents in the ligand on both the activities of the catalysts and the polymer microstructure. α-Diimine nickel(II) catalysts gave ***syndiotactic***-rich poly(Me methacrylate) with high mol. weight and narrow mol. weight distribution.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 16 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:736410 HCAPLUS Full-text
DOCUMENT NUMBER: 140:375600
TITLE: Synthesis of low-monol ***polyether polyols*** by using highly active catalysts and their applications to high-performance polyurethanes
AUTHOR(S): ***Kim, Il***; Ahn, Jun-Tae; Park, Inha; Lee, Sanghyun
CORPORATE SOURCE: Depart. of Polymer Sci.&Eng., Pusan National University, Pusan, 609-735, S. Korea
SOURCE: Polyurethanes Conference 2002, Conference Proceedings, Salt Lake City, UT, United States, Oct. 13-16, 2002 (2002), 583-593. Alliance for the Polyurethanes Industry: Arlington, Va.
CODEN: 69EMGV
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Polymns. of propylene oxide have been carried out by using double metal cyanide (DMC) catalysts based on Zn3[Co(CN)6]2. By controlling the type and the amount of complexing agent during preparation of catalyst the catalytic activity, initiation time, and the unsatn. level in ***polyether polyols*** could be tuned. By using polytetramethylene ether glycol (PTMEG) as a co-complexing agent together with tertiarybutyl alc., conventional complexing agent, the catalytic activity was sharply improved, the initiation time became short, and the unsatn. level was greatly lowered. The selection of the type of PTMEG was also important to maximize the effect of co-complexing agent. Various

catalysts prepared by changing the complexing agent were characterized by XPS, IR spectroscopy, and x-ray powder diffraction. 13C NMR anal. showed that the ***polyols*** have a random distribution of the configurational sequences and head-to-tail regiosequence, even if the amount of [rr] ***triad*** of ***polyol*** produced by DMC catalyst was larger than that of ***polyol*** by conventional KOH catalyst. The distortionless enhancement by polarization transfer anal. showed that there exist regioirregular sequences as well. The stress-strain curves of methylene diisocyanate/1,4-butanediol cured polyurethanes showed that the monol content contained in ***polyol*** showed a dramatic effect on the mech. properties of resulting polyurethane.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 17 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:641012 HCAPLUS Full-text

DOCUMENT NUMBER: 140:271250

TITLE: Synthesis of ultra-low monol ***polyether polyols*** by multi-metal catalysts

AUTHOR(S): ***Kim, Il***; Ahn, Jun-Tae; Park, Dae-Won; ***Lee, Sang-Hyun***; Park, Inha

CORPORATE SOURCE: Dept. of Polymer Science and Engineering, Pusan National University, Pusan, 609-735, S. Korea

SOURCE: Studies in Surface Science and Catalysis (2003), 145(Science and Technology in Catalysis 2002), 529-530 CODEN: SSCTDM; ISSN: 0167-2991

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polymns. of propylene oxide (PO) have been carried out by using double metal cyanide (DMC) catalysts based on Zn3[Co(CN)6]2. By using complexing agent during preparation of catalyst, the catalytic activity, initiation time, and the unsatn. level in ***polyether polyols*** could be tuned. The catalysts were characterized by XPS, IR spectroscopy, arid x-ray powder diffraction. 13C NMR anal. showed that the ***polyols*** have a random distribution of the configurational sequences. The stress-strain curves of methylene diisocyanate/1,4-butanediol cured polyurethanes (PU) showed that the monol content of ***polyol*** showed a dramatic effect on the mech. properties of PU.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 18 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:592449 HCAPLUS Full-text

DOCUMENT NUMBER: 139:337284

TITLE: Effects of dietary germanium biotite in weaned, growing and finishing pigs

AUTHOR(S): Kwon, O. S.; ***Kim, I. H.***; Hong, J. W.; ***Lee, S. H.***; Jung, Y. K.; Min, B. J.; Lee, W. B.; Shon, K. S.

CORPORATE SOURCE: Department of Animal Resource and Science, Dankook University, 330-714, S. Korea

SOURCE: Journal of Animal Science and Technology (2003), 45(3), 355-368 CODEN: JASTCC

PUBLISHER: Korean Society of Animal Sciences and Technology

DOCUMENT TYPE: Journal

LANGUAGE: Korean

AB In Exp. 1, the effect of dietary germanium biotite on growth performance and nutrient digestibility in nursery pigs was investigated. A total of sixty crossbred pigs (initial body weight 15.09±0.18 kg) were used in this experiment This study was carried out for 28 days. The five treatments were

control (CON; basal diet), GB0.1 (basal diet + germanium biotite 0.1%), GB0.3 (basal diet + germanium biotite 0.3%), GB0.6 (basal diet + germanium biotite 0.6%) and GB1.0 (basal diet + germanium biotite 1.0%). For the overall period, ADG and Grain/feed were not significantly different among the treatments. In Exp. 2, the effect of germanium biotite as a substitute for antibiotics in growing pigs was evaluated. A total of fifty five crossbred pigs (initial body weight 32.47±0.9 kg) were used in this experiment The three treatments were neg. control (NC: basal diet without antibiotic), pos. control (PC: basal diet + 200 ppm CTC) and GB0.3 (basal diet + germanium biotite 0.3%). Pigs fed PC (17%, 385 vs 451 g/d) and GB0.3 (14%, 385 vs 438 g/d) diets grew faster ($P<0.05$) than pigs fed NC diet. Pigs fed PC and GB0.3 diets resulted higher ($P<0.05$) ADFI than pigs fed CON diet. However, pigs fed GB0.3 diet had improved gain/feed compared to pigs fed NC diet ($P<0.05$). Apparent digestibility of DM and N by pigs fed PC and GB0.3 diets were greater ($P<0.05$) than those by pigs fed NC diet. In Exp. 3, a study was conducted to determine the effect of dietary germanium biotite on growth performance, plasma characteristics, backfat thickness and fecal ammonia gas concentration in finishing pigs. A total of seventy-two finishing pigs (initial body weight 78.56±1.32 kg) were used in this experiment The treatments included (1) Control (CON; basal diet) (2) GB1.0 (basal diet + germanium biotite 1.0%), (3) GB3.0 (basal diet + germanium biotite 3.0%). Pigs fed GB1.0 diet grew faster than pigs fed CON diet and GB0.3 diet ($P<0.05$). Also, pigs fed CON diet showed higher ($p<0.05$) ADFI than pigs fed GB3.0 diet. Pigs fed GB diets had improved gain/feed compared to pigs fed CON diet ($P<0.05$). Total and VLDL concns. in plasma of pigs fed GB diet were significantly decreased compared to those in pigs fed CON diet ($P<0.05$). However, HDL-cholesterol concentration in plasma of pigs was significantly increased compared to those in pigs fed CON diet ($P<0.05$). Pigs fed CON diet exerted higher ($P<0.05$) backfat thickness than pigs fed GB1.0 (5.4%, 27.19 vs 25.71 mm) and GB3.0 (16.1%, 27.19 vs 22.81 mm) diets. Feces from CON treatment were higher in fecal ammonia gas concentration than faces from pigs fed GB1.0 (64.1%, 17.00 vs 6.10 mg/kg) and GB3.0 (61.8%, 17.00 vs 6.50 mg/kg) treatments ($P<0.05$). In conclusion, the results suggest that the dietary addition of germanium biotite into diets for nursery pigs did not affect growth performance. The results also suggest the possibility of germanium biotite to replace antibiotic in diets for growing pigs. In finishing pigs, dietary supplementation of germanium biotite was an effective means for improving growth performance and for decreasing total- and LDL+VLDL-plasma cholesterols, backfat and fecal ammonia gas concentration

L37 ANSWER 19 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:500173 HCAPLUS Full-text

DOCUMENT NUMBER: 139:197815

TITLE: Polymerization of methyl methacrylate with Ni(II) α-diimine/MAO and Fe(II) and Co(II) pyridyl bis(imine)/MAO

AUTHOR(S): ***Kim, Il***; Hwang, Jeong-Mi; Lee, Jin Kook; Ha, Chang Sik; Woo, Seong Ihl

CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Pusan, 609-735, S. Korea

SOURCE: Macromolecular Rapid Communications (2003), 24(8), 508-511

CODEN: MRCOE3; ISSN: 1022-1336

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Polymns. of Me methacrylate with (α-diimine)nickel(II)/Me aluminoxane (MAO) and pyridyl bis(imine)iron(II) and (pyridyl bis(imine))cobalt(II)/MAO are reported. Effects of structural variation of the ligand on the activities of

catalysts and polymer microstructure are described. The catalyst systems gave ***syndiotactic***-rich poly(Me methacrylate). The α-diimine system showed much higher activity than the pyridyl bis(imine) systems under similar polymerization conditions.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 20 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:407834 HCAPLUS Full-text
DOCUMENT NUMBER: 139:196775
TITLE: Effect of dietary α-1,6-galactosidase and β-1,4-mannanase on growth performance and nutrient digestibility in nursery and growing pigs
AUTHOR(S): Kwon, O. S.; ***Kim, I. H.***; ***Lee, S. H.***; Hong, J. W.; Kim, J. H.; Moon, T. H.; Lee, J. H.
CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, Cheonan, 330-714, S. Korea
SOURCE: Journal of Animal Science and Technology (2003), 45(2), 211-218
CODEN: JASTCC
PUBLISHER: Korean Society of Animal Sciences and Technology
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB For the Exp. 1, a total of sixty pigs (10.57±0.30kg average initial body weight) were used in a 15-d growth assay to determine the effect of dietary α-1,6-galactosidase and β-1,4-mannanase on growth performance and nutrient digestibility. Dietary treatments included (1) CON (corn-dried whey-SBM based diet) and (2) EC0.1 (CON diet + 0.1% enzyme complex of α-1,6-galactosidase and β-1,4-mannanase). Through the entire exptl. period, gain/feed of pigs fed the EC0.1 diet was higher (0.43 vs 0.52) than that of pigs fed the CON diet ($P<0.05$). Pigs fed the EC0.1 diet showed significant ($P<0.05$) improvement in dry matter (74.82% vs 82.41%) and nitrogen (70.59% vs 77.88%) digestibilities compared to pigs fed the CON diet. For the Exp. 2, a total of thirty six pigs (22.30±0.45kg average initial body weight) were used in a 30-d growth assay to determine the effects of dietary α-1,6-galactosidase and β-1,4-mannanase in the low energy diet on growth performance and nutrient digestibility. Dietary treatments included (1) AME (adequate ME diet), (2) AME+EC0.1 (AME diet + 0.1% enzyme complex) and (3) LME+EC0.1 (low ME diet + 0.1% enzyme complex). Through the entire exptl. period, average daily feed intake of pigs fed enzyme complex supplemented diets was higher than that of pigs fed the CON diet ($P<0.05$). Also, pigs fed the AME+EC0.1 diet showed significant ($P<0.05$) increase in ADFI (1,401g vs 1,733g) compared to pigs fed the CON diet. Pigs fed the enzyme complex supplemented diet showed significant ($P<0.05$) improvement in dry matter and nitrogen digestibilities compared to pigs fed the CON diet. In conclusion, the results obtained from these feeding trials suggest that the supplementation of α-1,6-galactosidase and β-1,4-mannanase was an effective means for improving growth performance and dry matter and nitrogen digestibilities in nursery and growing pigs.

L37 ANSWER 21 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:372968 HCAPLUS Full-text
DOCUMENT NUMBER: 139:120706
TITLE: A study on the paste boronizing treatment of 12%Cr steel for steam turbine nozzle and high temperature surface properties
AUTHOR(S): Cho, J. H.; Son, G. S.; Yoon, J. H.; Kim, H. S.; ***Lee, S. H.***; Byon, E.; Lee, E. Y.; ***Lee, S. H.***; ***Kim, I. S.***

CORPORATE SOURCE: Department of Metallurgy & Materials Science, Changwon University, Changwon, 641-773, S. Korea
SOURCE: Taehan Kumsok, Chaeryo Hakhoechi (2003), 41(2), 131-139
CODEN: TKHABB
PUBLISHER: Korean Institute of Metals and Materials
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB 12% Cr steel used for a nozzle in a steam turbine was paste-boronized and its surface properties at high temperature were evaluated. A typical interfacial serrated tooth structure, which consisted of an outer layer of FeB and an inner layer of Fe2B, was observed in the boronized layer of the specimen and its activation energy was 286.7 kJ/mol. Cracks due to the difference of thermal expansion coefficient and brittleness of the FeB layer were observed Voids were also observed at tip area of the tooth structure. Weight of the specimen exposed at 740 °C increased rapidly from the initial stage of oxidation Iron oxide was mixed in chromium oxide at outer layer of the oxidized specimen, but chromium oxide and molybdenum were mixed in iron oxide at inner layer. The boronized specimen has shown excellent erosion resistance up to 20 times higher than that of a non-treated specimen.

L37 ANSWER 22 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:341219 HCAPLUS Full-text
DOCUMENT NUMBER: 139:117765
TITLE: Polymerization of propylene oxide by using double metal cyanide catalysts and the application to polyurethane elastomer
AUTHOR(S): ***Kim, Il***; Ahn, Jun-Tae; Ha, Chang Sik; Yang, Chul Sik; Park, Inha
CORPORATE SOURCE: Department of Polymer Science and Engineering, Pusan National University, Jangjeon-dong, Geumjeong-gu, Pusan, 609-735, S. Korea
SOURCE: Polymer (2003), 44(11), 3417-3428
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Polymns. of propylene oxide have been carried out by using double metal cyanide (DMC) catalysts based on Zn3[Co(CN)6]2. By controlling the type and the amount of complexing agent during preparation of catalyst the catalytic activity, initiation time, and the unsatn. level in ***polyether polyols*** could be tuned. Various catalysts prepared by changing the complexing and co-complexing agents were characterized by XPS, IR spectroscopy, and X-ray powder diffraction. Highly active catalyst prepared by choosing a polytetramethylene ether glycol as a co-complexing agent resulted in polyoxypropylenes (POP) with low very low unsatn. level (0.003-0.006 meq/g) and with narrow mol. weight distribution (MWD = 1.02-1.04). The active sites of DMC-catalyzed polymerization of propylene oxide have both cationic and coordinative characters. Anal. of 13C NMR showed that the ***polyols*** have a random distribution of the configurational sequences and head-to-tail regio sequence, even if the amount of [rr] ***triad*** of ***polyol*** produced by DMC catalyst was larger than that of ***polyol*** by conventional KOH catalyst. The distortionless enhancement by polarization transfer anal. showed that there exist regio irregular sequences as well. The stress-strain curves of methylene diisocyanate/1,4-butanediol cured POP-based polyurethane elastomers showed that the unsatn. content contained in POP showed a dramatic effect on the mech. properties.
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 23 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:189878 HCAPLUS Full-text
DOCUMENT NUMBER: 138:410887
TITLE: Electron paramagnetic resonance characterization of Cr3+ impurities in a β-Ga2O3 single crystal
AUTHOR(S): Yeom, T. H.; ***Kim, I. G.***; ***Lee, S. H.***; Choh, S. H.; Yu, Y. M.
CORPORATE SOURCE: Department of Physics, Chongju University, Chongju, 360-764, S. Korea
SOURCE: Journal of Applied Physics (2003), 93(6), 3315-3319
CODEN: JAPIAU; ISSN: 0021-8979
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB β-Ga2O3 single crystals doped with the Cr3+ ion were grown in an O2 atmosphere using the floating zone method. EPR spectra of the Cr3+ ion were recorded with an X band EPR spectrometer at 20°. The rotation patterns of Cr3+ spectra in the crystallog. planes together with spin-Hamiltonian parameters showed unequivocally that the actual local site symmetry of the Cr3+ ion in β-Ga2O3 is not orthorhombic, as previously reported, but monoclinic. The spectroscopic splitting tensor g and the zero-field splitting parameters Bkq s were determined with an effective spin Hamiltonian. The Cr3+ ions replace Ga3+ ions in O octahedra rather than in O tetrahedra. The energy levels of the ground state of a Cr3+ ion embedded in the β-Ga2O3 crystal were calculated

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 24 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:20716 HCAPLUS Full-text
DOCUMENT NUMBER: 138:254320
TITLE: Influence of dietary carbohydrase on egg quality and nutrient digestibility in laying hens
AUTHOR(S): Min, B. J.; ***Kim, I. H.***; Hong, J. W.; Moon, T. H.; Lee, J. H.; Han, Y. K.; Kwon, O. S.; ***Lee, S. H.***; Lee, W. B.
CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, S. Korea
SOURCE: Han'guk Kagum Hakhoechi (2002), 29(1), 19-23
CODEN: HKHAAE; ISSN: 1225-6625
PUBLISHER: Korean Society of Poultry Science
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB This study was conducted to investigate the effects of dietary carbohydrase (multi-enzyme: α-galactosidase and mannanase) on egg quality and nutrient digestibility in laying hens. One hundred forty four, 46-wk-old, ISA Brown com. layers were used in a 28-d feeding trial after a 7-d adjustment period. Dietary treatments were (1) CON(basal diet), (2) ME 0.1(basal diet + 0.1% multi-enzyme), (3) ME 0.2 (basal diet + 0.2% multi-enzyme). For overall periods, hen-day egg production, egg weight, egg shell breaking strength and egg shell thickness were not influenced by the multi-enzyme. As the adding level of multi-enzyme increased in the diet, egg yolk color and egg yolk index tended to increase with significant differences. Digestibility of DM was not affected by multi-enzyme. However, digestibility of N increased significantly as the concentration of multi-enzyme in the diet was increased. In conclusion, supplemental carbohydrase in laying hen diet may have some roles in improving the egg yolk color and N digestibility.

L37 ANSWER 25 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:20712 HCAPLUS Full-text
DOCUMENT NUMBER: 138:254374
TITLE: Influence of dietary activated coconut charcoal on egg quality and plasma cholesterol level in laying hens
AUTHOR(S): Min, B. J.; ***Kim, I. H.***; Lee, W. B.; Hong, J. W.; Kim, J. H.; Kwon, O. S.; ***Lee, S. H.***
CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, S. Korea
SOURCE: Han'guk Kagum Hakhoechi (2002), 29(1), 13-18
CODEN: HKHAAE; ISSN: 1225-6625
PUBLISHER: Korean Society of Poultry Science
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB This study was conducted to investigate the effects of dietary activated coconut charcoal (ACC) on performance, egg quality and plasma cholesterol level in laying hens. One hundred forty four, 47-wk-old, ISA Brown com. layers were used in a 28-d feeding. trial after a 7-d adjustment period. Four dietary treatments were 0, 0.5, 1.0 and 1.5% levels of ACC supplemented to a corn-soybean meal basal diet. Egg production was significantly increased as the level of ACC was increased. However, egg weight was significantly decreased by the addition of ACC in diets. Egg shell breaking strength tended to decrease as the level of ACC increased, however, no significance was found in this respect. As the level of ACC increased, egg shell thickness decreased significantly. Yolk color tended to increase by the addition of ACC. Egg yolk index were significantly increased by the addition of ACC in the diet. No significant difference was found among four treatments in total cholesterol, HDL cholesterol, and LDL+VLDL cholesterol concns. in plasma. In conclusion, dietary supplementation of ACC to layer diets could be used to increase egg production, and yolk index.

L37 ANSWER 26 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:20708 HCAPLUS Full-text
DOCUMENT NUMBER: 138:254287
TITLE: Influence of dietary supplemental germanium colloid on egg quality and immune response in layers
AUTHOR(S): Hong, J. W.; ***Kim, I. H.***; Kwon, O. S.; ***Lee, S. H.***; Min, B. J.; Lee, W. B.
CORPORATE SOURCE: Department of Animal Resource and Science, Dankook University, S. Korea
SOURCE: Han'guk Kagum Hakhoechi (2002), 29(1), 7-12
CODEN: HKHAAE; ISSN: 1225-6625
PUBLISHER: Korean Society of Poultry Science
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB This study was conducted to investigate the effects of feeding germanium colloid(GC) on the egg quality and immune response in laying hens. One hundred forty four layers, 32-wk-old ISA Brown, were used in a 40-d exptl. assay with a 7-d adjustment period. Dietary treatments included (1) control (basal diet; CON), (2) 0.5ppm GC (basal diet + 0.5ppm germanium), (3) 1.0ppm GC (basal diet + 1.0 ppm germanium). For overall periods, hen-day egg production tended to be increased as the concentration of GC in the diet was increased with significant difference (linear effect, P<0.01). Laying hens fed the 0.5ppm GC diet were significantly (P<0.01) lower in egg shell breaking strength than laying hens fed CON or 1.0 ppm GC diets. Egg shell thickness and yolk color were not influenced by GC supplementation. Laying hens fed the 1.0ppm GC diet were higher in egg yolk index than laying hens fed CON and 0.5ppm GC diets with significant difference (quadratic effect, P<0.02). As adding level of germanium colloid increased in the diet, total serum

cholesterol and triglyceride tended to be decreased. However, the effect of GC supplementation did not show significant in the levels of total serum cholesterol and triglyceride. Also, HDL- and LDL+VLDL-cholesterol in serum were not statistically different among the treatments. Red blood cell and white blood cell count in blood tended to be increased as the concentration of GC in the diets was increased with significant difference (P<0.01). Hematocrit concentration in blood was successfully increased by supplementation of GC (P<0.01). In conclusion, although egg quality was not influenced by GC supplementation. immune status was improved in laying hens.

L37 ANSWER 27 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:907149 HCAPLUS Full-text
DOCUMENT NUMBER: 138:5034
TITLE: Double metal cyanide catalyst ligated with monovalent alcohol and polyoxyalkylene for producing polyoxyalkylenes by epoxide polymerization
INVENTOR(S): ***Kim, Il; Lee, Sang Hyun***
PATENT ASSIGNEE(S): SK Evertec Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2002177523	A1	20021128	US 2002-112843		20020329
US 6627575	B2	20030930			
KR 2002080824	A	20021026	KR 2001-20627		20010418
PRIORITY APPLN. INFO.:			KR 2001-20627	A	20010418

AB Disclosed is a double metal cyanide complex catalyst for producing polyol, which is produced by using monovalent alc. and polyvalent alc. as a complexing agent. The double metal cyanide complex catalyst has advantages in that when polyol is produced by an epoxide polymerization reaction, the amount of unsatd. polyol produced is small, catalyst activation time is short, and the production yield of polyol is increased, therefore there is no need to remove remaining catalyst from polyol after polymerization reaction.

L37 ANSWER 28 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:759254 HCAPLUS Full-text
DOCUMENT NUMBER: 138:114952
TITLE: Positive resist for KrF excimer laser lithography
AUTHOR(S): Park, S. J.; ***Kim, I. H.***; Kang, Y. J.; Lee, H.; ***Lee, S. H.***; Choi, S. J.
CORPORATE SOURCE: Department of Chemistry, Hanyang University, Seoul, 133-791, S. Korea
SOURCE: Journal of Vacuum Science & Technology, B: Microelectronics and Nanometer Structures (2002), 20(5), 2108-2112
CODEN: JVTBD9; ISSN: 0734-211X
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In order to develop a new pos.-tone, chemical amplified photoresist for 248 nm lithog., a copolymer containing acrylic silicon moiety was synthesized. The copolymer of 1,3-bis(trimethylsilyl)isopropyl methacrylate and 4-hydroxystyrene was prepared by free radical polymerization The polymer

structure, properties and acid catalyzed deprotection were evaluated by 1H NMR, Fourier transform IR, UV, thermogravimetric anal. and gel permeation chromatog. This polymer is thermally stable up to 150 ° and is suitably transparent at the KrF laser output wavelength (248 nm). The lithog. evaluation shows the capability of 0.28 μm resolution using a KrF excimer laser stepper.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 29 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:504821 HCAPLUS Full-text

DOCUMENT NUMBER: 137:63629

TITLE: Method of homo- or co-polymerization of α-olefin

INVENTOR(S): Ro, Ki-Su; ***Kim, Il-Seop***; Yang, Chun-Byung; Shin, Moon-Young

PATENT ASSIGNEE(S): Samsung General Chemicals Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002051881	A1	20020704	WO 2001-KR794	20010516
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
KR 2002054051	A	20020706	KR 2000-82663	20001227
EP 1360210	A1	20031112	EP 2001-932347	20010516
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002120079	A1	20020829	US 2001-871253	20010530
US 6559250	B2	20030506		
JP 2002212219	A2	20020731	JP 2001-197021	20010628
TW 555770	B	20031001	TW 2001-90118797	20010801

PRIORITY APPLN. INFO.:

KR 2000-82663	A	20001227
WO 2001-KR794	W	20010516
TH 2001-66339	A	20010618
JP 2001-197021	A	20010628

AB Present invention relates to a method of homo- or co-polymerization of α-olefin by using a catalyst system which comprises the following components: (1) a solid complex Ti catalyst produced by a production method comprising the following steps: (a) preparing a Mg compound solution by dissolving a Mg halide compound and a compound of Group IIIA of the Periodical Table in a solvent of mixture of cyclic ester, ≥1 types of alc., a P compound, and an organic silane; (b) precipitating the solid particles by reacting the Mg compound solution with a transitional metal compound, a Si compound, a Sn compound, or the mixture thereof; and (c) reacting the precipitated solid particles with a Ti compound and electron donors; (2) an organometallic compound of metal of Group IIIA of the Periodical Table; and (3) external electron donors comprising ≥3 types of organo-Si compds., wherein the melt flow rates of the homopolymers obtained from polymerization by individually

using the organo-Si compds. under the same polymerization conditions are ≤5, 5-20, and 20 or higher, resp. According to the present invention, it has an advantage of obtaining polymers of broad mol. weight distribution with high H reactivity and melt flow rates while maintaining high ***stereoregularity*** and yields for olefin homo- or co-polymers during homo- or co-polymerization of α-olefin having ≥3 C atoms.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 30 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:731494 HCAPLUS Full-text
DOCUMENT NUMBER: 136:20948
TITLE: Molecular interactions of soaked nonionic dye in ionomer films
AUTHOR(S): ***Lee, S. H.***; Lee, W. S.; Lee, S. J.; Kim, S. S.; ***Kim, I.***; Song, K.; Landis, F. A.; Moore, R. B.
CORPORATE SOURCE: College of Environment and Applied Chemistry, Kyung Hee University, Yongin, 449-701, S. Korea
SOURCE: Polymer (Korea) (2001), 25(5), 671-678
CODEN: POLLDG; ISSN: 0379-153X
PUBLISHER: Polymer Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB Sodium and zinc salts of poly(ethylene-co-methacrylic acid) ionomers consist of three phases, i.e. ionic aggregates, amorphous, and crystalline phases. Nile red dye mols. applied as a methanolic solution are located near the amorphous phase or ionic aggregates within the ionomer films. Depending on the location of the mols. in the ionomer film, they are under influence of dispersion forces (ethylene parts), polar forces (acid parts), and ionic dipole (ionic aggregates) interactions. The UV/visible absorption peak of the dye under the dispersion force is found at near 500 nm, for the dye under the polar force effect 525 nm, and 550 and 610 nm for the dyes under Na+ and Zn2+ ionization effects, resp. Since the divalent Zn2+ ion has a larger ionic dipole than the monovalent Na+ ion, the larger red-shift of the absorption band due to the ionic dipole interaction is observed for Zn2+ counter ion.

L37 ANSWER 31 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:683542 HCAPLUS Full-text
DOCUMENT NUMBER: 136:117833
TITLE: Effects of Phytezyme supplementation on the growth performance and nutrient digestibility in growing pigs
AUTHOR(S): Hong, J. W.; ***Kim, I. H.***; Kwon, O. S.; ***Lee, S. H.***; Bae, H. D.; Kang, S. J.; Yang, U. M.
CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, Cheonan, 330-714, S. Korea
SOURCE: Asian-Australasian Journal of Animal Sciences (2001), 14(10), 1440-1443
CODEN: AJASEL; ISSN: 1011-2367
PUBLISHER: Asian-Australasian Journal of Animal Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Forty 8 Duroc+Yorkshire+Landrace swine (15.2±0.3 kg average initial BW) were used conducted to evaluate the effects dietary phytase (Phytezyme, WOOJIN, Co. Ltd) supplementation on the growth performance and nutrient digestibility in growing swine. There were 3 swine per pen and 4 pens per treatment. Treatments were 1) Con (corn-wheat-SBM), 2) PE0.1 (low-P diet+0.1% Phytezyme),

3) PE0.2 (low-P diet+0.2% Phytezyme), 4) PE0.3 (low-P diet+0.3% Phytezyme). During d 0 to 28, average daily gain was not significantly different among the treatments. Pigs fed PE0.3 diet significantly decreased (p<0.05) their average daily feed intake compared to swine fed Con diet. Also, gain/feed in swine fed PE0.1 and PE0.3 diet was improved (p<0.05) compared to swine fed Con and PE0.2 diet (p<0.05). For d 28 to 56, swine fed PE0.2 diet grew significantly faster (p<0.05) than swine fed Con and PE0.1 diet. Gain/feed was greater (p<0.05) for PE0.2 and PE0.3 treatments than for Con. For overall period, average daily gain was increased (p<0.05) by the addition of 0.2% Phytezyme compared with Con. Gain/feed was significantly improved (p<0.05) by supplementation of PE0.3. Pigs fed PE0.2 showed increased DM and N digestibilities compared to swine fed other treatments. Supplemented diets PE0.2 and PE0.3 improved (p<0.05) the apparent digestibility of Ca and P compared to other treatments. In conclusion, the results obtained from these feeding trials suggest that the Phytezyme supplementation of diets for growing-finishing swine had improved growth performance and nutrient availability.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 32 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:682445 HCAPLUS Full-text

DOCUMENT NUMBER: 136:117842

TITLE: Effects of yucca extract and (or) far infrared emitted materials supplementation on the growth performance, serum characteristics and ammonia production of growing and finishing pigs

AUTHOR(S): Hong, J. W.; ***Kim, I. H.***; Moon, T. H.; Kwon, O. S.; ***Lee, S. H.***; Kim, Y. G.

CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, Cheonan, 330-714, S. Korea

SOURCE: Asian-Australasian Journal of Animal Sciences (2001), 14(9), 1299-1303
CODEN: AJASEL; ISSN: 1011-2367

PUBLISHER: Asian-Australasian Journal of Animal Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB For the Exp. 1, a total of fifty four crossbred [(Duroc+Yorkshire)+Landrace] pigs (77.67±1.42 kg average initial BW) were used in a 41-d growth assay to determine the effects of yucca extract supplementation on growth performance, nutrient digestibility and serum characteristics of finishing pigs. Dietary treatments included 1) Control (basal diet), 2) YE60 (basal diet+60 ppm yucca extract), 3) YE120 (basal diet+120 ppm yucca extract). Average daily gain was not improved by yucca extract supplementation during the whole exptl. perid (d 0 to 41). Pigs fed control diet showed the best average daily gain. Pigs fed control and YE120 diets tended to increase average daily feed intake compared with pigs fed YE60 diet (quadratic effect, p<0.0001). Gain/feed with control treatment was significantly better than the YE groups (linear effect, p<0.071). However, there was no significant difference among levels of yucca extract (p>0.10). Apparent digestibility of dry matter in pigs fed yucca extract were greater than for pigs fed control diets (linear effect, p<0.017). Pigs fed YE120 tended to have higher digestibility of nitrogen than pigs fed the control diets (linear effect, p<0.019). There were no significant differences in Total-, HDL- and LDL-cholesterol concns. of serum, and the blood urea nitrogen (BUN) concns. in serum was not influenced by the yucca extract supplementation (p>0.10). For the Exp. 2, fifteen [(Duroc+Yorkshire)+Landrace] pigs (25.00±0.50 kg average initial BW) were used in a 30-d metabolism experiment to determine the effects of yucca extract supplementation on fecal ammonia gas production Treatments were: 1) Control (basal diet): 2) YE (basal diet+150 ppm yucca extract); 3) BD (basal diet+100

ppm Bio-Dr; yucca extract+far IR emitted materials). Fecal ammonia gas production differences between d 0 and d 30 were significantly reduced ($p<0.05$) by feeding BD compared to control and YE. Also, when pigs were fed the diet with YE tended to be decreased ammonia gas production compared to pigs fed the control diet without significant differences ($p>0.05$). There were no differences for DM and N digestibility among pigs fed the treatment diets. In conclusion, yucca and (or) far IR radiol. materials can be used to make environment-friendly diets for growing-finishing pigs without neg. effects on growth performance and nutrient digestibility.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 33 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:412742 HCAPLUS Full-text
DOCUMENT NUMBER: 135:60622
TITLE: Optimum particle size of corn for growth performance, nutrient digestibility and feed cost in pigs
AUTHOR(S): ***Lee, S. H.; Kim, I. H.;*** Hong, J. W.; Kwon, O. S.
CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, Cheonan, Choognam, 330-714, S. Korea
SOURCE: Journal of Animal Science and Technology (2001), 43(2), 185-192
CODEN: JASTCC
PUBLISHER: Korean Society of Animal Sciences and Technology
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB In Experiment 1, 72 nursery piglets (Duroc + Yorkshire + Landrace, average initial body weight 12.36±0.59 kg) were fed diets with corn ground in hammer mill with 3 mm (fine particle) or 4.5 mm (coarse particle) screens. After 28 days on the diets, the piglets fed the fine corn diet had higher average daily gain (ADG) than pigs fed the coarse corn diet, whereas not much difference in average daily feed intakes (ADFI) was found. The gain/feed ratio (G/F) and dry matter and N digestibility in piglets fed the fine corn diet were improved compared to pigs fed the coarse corn diet. In Experiment 2, 48 finishing pigs (Duroc + Yorkshire + Landrace, average initial body weight 47.54±0.69 kg) were used in a 28-day growth study. The corn was ground in hammer mill with 3 mm (fine particle) or 6 mm (coarse particle) screens. The ADG, ADFI, and G/F were not much different between the dietary treatments. The dry matter and N digestibility and intake of digestible nutrients were greater in pigs fed the fine corn diet vs. the coarse diet. Pigs fed the fine corn diet had decreased fecal nutrient excretion compared to pigs fed the coarse corn diet. The total feed cost per kg weight gain was higher (921 vs. 841 won) with the coarse than with the fine corn diet. Thus, fine corn particle size led to greater growth performance and nutrient digestibility than coarse particle size in nursery and finishing pigs.

L37 ANSWER 34 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:412741 HCAPLUS Full-text
DOCUMENT NUMBER: 135:60621
TITLE: Effects of egg yolk antibodies to replace antibiotic in segregated early-weaned pigs
AUTHOR(S): Hong, J. W.; ***Kim, I. H.;*** Kwon, O. S.; ***Lee, S. H.;*** Kim, J. W.
CORPORATE SOURCE: Department of Animal Resource & Science, Dankook University, Chonan, 330-714, S. Korea
SOURCE: Journal of Animal Science and Technology (2001), 43(2), 177-184
CODEN: JASTCC

PUBLISHER: Korean Society of Animal Sciences and Technology
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB The effects of egg yolk antibodies (EYA) from chickens immunized with fimbrial antigens from Escherichia coli strains K88 and 987P on growth performance, nutrient digestibility, and fecal scores were examined in 72 segregated early-weaned piglets (5.04±0.09 kg average initial body weight at 12 days of age). The dietary treatments included neg. control (NC, basal diet with no antibiotic), pos. control (PC, basal diet with 0.5% Apralan 20), EYA0.1 (basal diet with 0.1% EYA), EYA0.2 (basal diet with 0.2% EYA), EYA0.3 (basal diet with 0.3% EYA), and EYA0.4 (basal diet with 0.4% EYA). After 4 days of feeding the diets, all pigs were challenged with K88 and 987P at doses of 6.0 + 109 and 1.2 + 1010 cfu, resp. At 2 and 4 days after the challenge the fecal scores (0 normal, 1 soft feces, 2 mild diarrhea, 3 severe diarrhea) were determined Pigs fed the EYA and PC diets had greater average daily gains and gain/feed ratios than pigs fed the NC diet. The apparent digestibilities of dry matter and N by pigs fed EYA were not much improved compared to pigs fed PC. Pigs fed the EYA (fecal score 0.8) and PC (fecal score 1.0) diets tended to decrease the incidence of diarrhea on day 2 after the challenges compared to pigs fed the NC diet (fecal score 1.8). Thus, EYA can be used to replace feed antibiotics in segregated early-weaned piglets without neg. effects on growth performance, nutrient digestibility, and fecal bacterial scores.

L37 ANSWER 35 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:235173 HCAPLUS Full-text
DOCUMENT NUMBER: 135:13376
TITLE: Electron paramagnetic resonance studies of Mn2+ ions in β-Ga2O3 single crystal
AUTHOR(S): ***Kim, I. G.***; Yeom, T. H.; ***Lee, S. H.*** ; Yu, Y. M.; Shin, H. W.; Choh, S. H.
CORPORATE SOURCE: Department of Physics, Chongju University, Chongju, 360-764, S. Korea
SOURCE: Journal of Applied Physics (2001), 89(8), 4470-4475
CODEN: JAPIAU; ISSN: 0021-8979
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A Mn2+ ion-doped β-Ga2O3 single crystal was grown by using a floating zone method. By employing an X-band EPR spectrometer; Mn2+ EPR spectra were recorded at room temperature The rotation patterns in the crystallog. planes together with spin-Hamiltonian parameters of Mn2+ show unequivocally that the actual local site symmetry of the Mn2+ ion is monoclinic. A Mn2+ ion lies on a site with a 2-fold rotation symmetry, parallel to the monoclinic axis of the crystal. The spectroscopic splitting tensor g, zero-field splitting parameters Bkqs, and the hyperfine tensor A are determined with the effective spin Hamiltonian. The Mn2+ ion lies at only one site, the substitutional site for the Ga3+ ion in the oxygen octahedron rather than in tetrahedron. Energy levels of the ground state for a Mn2+ ion embedded in the β-Ga2O3 crystal are calculated

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 36 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:711368 HCAPLUS Full-text
DOCUMENT NUMBER: 134:29724
TITLE: Polymerization of α-olefin catalyzed by rac-(EBI)M(NMe2)2(M=Zr, Hf)/AIR3/[Ph3C] [B(C6F5)4]
AUTHOR(S): ***Kim, Il***; Choi, Chang Soo; Kim, Ki Tae

CORPORATE SOURCE: Department of Chemical Engineering, University of Ulsan, Ulsan, 680-749, S. Korea
SOURCE: Polymer (Korea) (2000), 24(5), 646-655
CODEN: POLLDG; ISSN: 0379-153X
PUBLISHER: Polymer Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB Polymns. of higher α-olefins were carried out in toluene by using highly isospecific catalyst, rac-(EBI)M(NMe2)2 (EBI=1,2-ethylenebis-(1- indenyl); M=Zr(rac-1); M =Hf(rac-2)) in the presence of Al(i-Bu)3/[Ph3C][B(C6F5)4]. The polymerization of high α-olefin showed high activity and similar polymerization behavior. The polymerization activity was affected by both monomer size and lateral size of polymer chain. The conversion of monomer to polymer decreases with the increased lateral size in the order of 1-pentene>1-hexene> 1-octene>1-decene. The same dependences of melting behavior and intrinsic viscosity of polyolefin on lateral size were observed according to the results obtained by differential scanning calorimetry and intrinsic viscosity. All poly(α-olefin)s showed very high isotacticity(***triad***) and the isotacticity increases in the order of poly(1-pentene)<poly(1-hexene)<poly(1-octene)<poly(1-decene). 1H NMR and Raman spectra anal. showed that chain transfer to cocatalyst, which generates saturated Me groups, is a main chain termination. The B-hydride eliminations, which generate unsatd. vinylidene, tri-substituted, and vinylene end group, are found to be minor chain terminations.

L37 ANSWER 37 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:401028 HCAPLUS Full-text
DOCUMENT NUMBER: 133:184520
TITLE: The comparison on the performance of a gamma-ray spectrometer with the variation of Pt(Au)/CdZnTe/Pt(Au) interface
AUTHOR(S): ***Lee, S. H.; Kim, I. J.***; Choi, Y. J.; Hong, J. K.; Lee, H. K.; Chung, Y. C.; Yi, Y.; Kim, S. U.; Park, M. J.
CORPORATE SOURCE: Department of Physics, Korea University, Seoul, 136-701, S. Korea
SOURCE: Journal of Crystal Growth (2000), 214/215, 1111-1115
CODEN: JCRGAE; ISSN: 0022-0248
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Cd1-xZnxTe grown by high-pressure Bridgman method (HPB) is a good candidate for gamma-ray detection material. The metal contacting conditions are very important for the performance of gamma-ray detector. Therefore, it is essential to find proper contact technol. For these purposes, various contact methods (electroless deposition, thermal vacuum evaporation) and (Au, Pt) are attempted. From the measurement of current-voltage characteristics, gamma-ray spectroscopy and auger electron spectroscopy (AES), the phys. properties of metal contact on the CdZnTe are analyzed and contact methods compared with one another. Electroless Pt deposition has better properties than others in many respects.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 38 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:257726 HCAPLUS Full-text
DOCUMENT NUMBER: 133:17876
TITLE: Higher α-olefin polymerizations catalyzed by

rac-Me2Si(1-C5H2-2-CH3-4-tBu
)2Zr(NMe2)2/Al(iBu)3/[Ph3C][B(C6F5)4]

AUTHOR(S): ***Kim, Il***; Zhou, Jia-Min; Chung, Hoeil
CORPORATE SOURCE: Department of Chemical Engineering, The University of Ulsan, Ulsan, 680-749, S. Korea

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2000), 38(9), 1687-1697
CODEN: JPACEC; ISSN: 0887-624X
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Higher α-olefins, i.e., 1-pentene, 1-hexene, 1-octene, and 1-decene, were polymerized at 30° in toluene using highly isospecific rac-Me2Si(1-C5H2-2-Me-4-tBu)2Zr(NMe2)2 (rac-1) in the presence of Al(iBu)3/[CPh3][B(C6F5)4] as a cocatalyst formulation. Both the bulkiness of the monomer and the lateral size of the polymer chain influenced polymerization activity. A larger lateral of the polymer chain opens the π-ligands of the active site wider than a shorter lateral and favors the insertion of monomer, while insertion of a larger size monomer is more difficult than that of a smaller monomer due to steric hindrance. Highly isotactic poly(α-olefin)s of high mol. weight were produced. The mol. weight decreased from polypropylene to poly(1-hexene), and then increased from poly(1-hexene) to poly(1-decene). The isotacticity (as [mm] ***triad***) of the polymer decreased with increased lateral size in the order: poly(1-pentene) > poly(1-hexene) > poly(1-octene) > poly(1-decene). The similar dependence of the lateral size on the m.p. of the polymer was recorded by differential scanning calorimetry (DSC). 1H NMR anal. showed that a vinylidene group resulting from β-H elimination and saturated Me groups resulting from chain transfer to cocatalyst are the main end groups of polymer chains. The vinylidene and internal double bonds are also identified by Raman spectroscopy.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2000:58379 HCAPLUS Full-text
DOCUMENT NUMBER: 132:188707
TITLE: Electron paramagnetic resonance study of the Eu2+ ion in a PbWO4 single crystal

AUTHOR(S): Yeom, T. H.; ***Kim, I. G.; Lee, S. H.***; Choh, S. H.; Kim, T. H.; Ro, J. H.
CORPORATE SOURCE: Department of Physics, Chongju University, Chongju, 360-764, S. Korea

SOURCE: Journal of Applied Physics (2000), 87(3), 1424-1428
CODEN: JAPIAU; ISSN: 0021-8979
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ESR of the Eu2+ ion in a PbWO4 single crystal, grown by the Czochralski method, was studied using an X-band spectrometer. The rotation patterns in the crystallog. planes together with spin-Hamiltonian parameters of Eu2+ show that the local site symmetry of the Eu2+ ion is tetragonal. The spectroscopic splitting tensor g, zero-field splitting parameters Bkq, and hyperfine tensor A are determined with the effective spin Hamiltonian. Energy levels of the ground state for Eu2+ embedded in the PbWO4 crystal are calculated The Eu2+ ion substitutes for the Pb2+ ion without any charge compensation.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:554770 HCAPLUS Full-text
DOCUMENT NUMBER: 131:286891
TITLE: Synthesis and characterization of soluble random copolyimides
AUTHOR(S): ***Kim, I. C.***; Tak, T. M.
CORPORATE SOURCE: Division of Biological Resources and Materials Engineering, College of Agriculture and Life Science, Seoul National University, Suwon, 441-744, S. Korea
SOURCE: Journal of Applied Polymer Science (1999), 74(2), 272-277
CODEN: JAPNAB; ISSN: 0021-8995
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Random copolyimides with different proportions of a diamine component were prepared from diamines with various dianhydrides via thermal imidization of polyamic acid intermediate at 260°. The extent of imidization of poly(amic acid)s was monitored at various temps. by IR spectroscopy. The homopolyimide based on bis[4-(3-aminophenoxy)phenyl]sulfone and pyromellitic dianhydride is the only one that is soluble By changing the composition of bis[4-(3-aminophenoxy)phenyl]-sulfone and other diamines with pyromellitic dianhydride in N-methyl-2-pyrrolidone, soluble random copolyimides were prepared By random copolymn., the thermal properties and viscosity of homopolyimides could be controlled. All the soluble polyimides prepared are amorphous because of lack of ***stereoregularity***.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 41 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:520054 HCAPLUS Full-text
DOCUMENT NUMBER: 132:76468
TITLE: Morphology and synaptic connectivity of nitric oxide synthase-immunoreactive neurons in the guinea pig retina
AUTHOR(S): Oh, S.-J.; Kim, Hyung-Il; ***Kim, I.-B.***; Kim, Keun-Young; Huh, W.; Chung, Jin-Woong; Chun, M.-H.
CORPORATE SOURCE: Department of Anatomy, College of Medicine, The Catholic University of Korea, Seoul, 137-701, S. Korea
SOURCE: Cell & Tissue Research (1999), 297(3), 397-408
CODEN: CTSRCS; ISSN: 0302-766X
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Immunocytochem. methods with an antiserum against neuronal nitric oxide synthase (NOS) were applied to identify the morphol. and synaptic connectivity of NOS-like immunoreactive neurons in the guinea pig retina. In the present study, two types of amacrine cells were labeled with anti-NOS antisera. Type 1 cells had large somata located in the inner nuclear layer (INL) with long, sparsely branched processes ramifying mainly in stratum 3 of the inner plexiform layer (IPL). The somata of type 2 cells (smaller diams.) were located in the INL. Some displaced amacrine cells in the ganglion cell layer were labeled. The soma size of the displaced amacrine cells was similar to that of the type 2 amacrine cells. However, processes originating from type 2 amacrine cells and displaced amacrine cells stratified mainly in strata 1 and 5, resp. Some cone bipolar cells were weakly NOS-immunoreactive. The synaptic connectivity of NOS-like immunoreactive amacrine cells was identified in the IPL by electron microscopy. NOS-labeled amacrine cell processes received synaptic input from other amacrine cell processes and bipolar cell axon terminals in all strata of the IPL. The most frequent postsynaptic targets of NOS-immunoreactive amacrine cells were other amacrine cell

processes. Cone bipolar cells were postsynaptic to NOS-labeled amacrine cells in all strata of the IPL. Labeled amacrine cells synapsing onto ganglion cells were found only in sublamina b. A few synaptic contacts were observed between labeled cell processes. In the outer plexiform layer, dendrites of labeled bipolar cells made basal contact with cone pedicles or formed a synaptic ***triad*** opposed to a synaptic ribbon of cone pedicles.

REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 42 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:278854 HCAPLUS Full-text

DOCUMENT NUMBER: 131:59159

TITLE: The effect of AlR3 on propylene polymerization by rac-(EBI)Zr(NMe2)2/AlR3/[CPh3][B(C6F5)4] catalyst

AUTHOR(S): ***Kim, Il***; Choi, Chang-Soo

CORPORATE SOURCE: Department of Chemical Engineering, The University of Ulsan, Ulsan, 680-749, S. Korea

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1999), 37(10), 1523-1539
CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Ansa-zirconocene diamide complex rac-(EBI)Zr(NMe2)2 [rac-1, EBI = ethylene-1,2-bis(1-indenyl)] reacted with AlR3 (R = Me, Et, iBu) or Al(iBu2)H and then with [CPh3][B(C6F5)4] (2) in toluene in order to perform propylene polymerization by cationic alkylzirconium species, which are in situ generated during polymerization Through the sequential NMR-scale reactions of rac-1 with AlR3 or Al(iBu2)H and then with 2, rac-1 was demonstrated to be transformed to the active alkylzirconium cations via alkylated intermediates of rac-1. The cationic species generated by using AlMe3, AlEt3, and Al(iBu2)H as alkylating reagents tend to become heterodinuclear complex; however, those generated by using bulky Al(iBu)3 become base-free [rac-(EBI)Zr(iBu)]+ cations. The activity of propylene polymerization by rac-1/AlR3/2 catalyst was deeply influenced by various parameters such as the amount and the type of AlR3, metallocene concentration, [Al]/[2] ratio, and polymerization temperature Generally the catalytic systems using bulky alkylaluminum like Al(iBu)3 and Al(iBu)2H show higher activity but lower ***stereoregularity*** than those using less bulky AlMe3 and AlEt3. The alkylating reagent Al(iBu)3 is not as good a transfer agent as AlMe3 or AlEt3. The polymerization activities show maximum around [Al]/[2] ratio of 1.0 and increase monotonously with polymerization temperature The overall activation energy of both rac-1/Al(iBu)3/2 and rac-1/Al(iBu)2H catalysts is 6.0 kcal/mol. As the polymerization temperature increases, the ***stereoregularity*** of the resulting polymer decreases markedly, which is demonstrated by the decrease of [mmmm] pentad value and by the increase of the amount of polymer soluble in low boiling solvent. The phys. properties of polymers produced in this study were investigated by using 13C-NMR, differential scanning calorimetry (DSC), viscometry, and gel permeation chromatog. (GPC).

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 43 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:202021 HCAPLUS Full-text

DOCUMENT NUMBER: 130:264913

TITLE: Chromosome analysis by fluorescence in situ hybridization of callus-derived regenerants in Allium cyaneum

AUTHOR(S): ***Lee, S. H.***; Ryu, J. A.; Do, G. S.; Seo, B. B.; Pak, J. H.; ***Kim, I. S.***; Song, S. D.

CORPORATE SOURCE: Department Biology, Kyungpook National University, Taegu, 702, S. Korea
SOURCE: Plant Cell Reports (1998), 18(3-4), 209-213
CODEN: PCRPD8; ISSN: 0721-7714
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Investigations were performed to confirm the optimal in vitro culture conditions for callus induction and plant regeneration, to observe if somaclonal variation occurs among regenerated plants at the ploidy level and to analyze the chromosomal location of 5S and 18S-26S rRNA gene families using fluorescence in situ hybridization in callus-derived plants of Allium cyaneum. Highest callus initiation was achieved with bulb explants cultured on MS medium supplemented with 2,4-D and BAP at 1 mg L-1 each. A total of 195 plants was obtained when using MS medium supplemented with 1 mg L-1 NAA and 5 mg L-1 BAP; about 92% were diploid having 2n = 16; 8% showed a variation in ploidy level. Using digoxigenin-labeled 5S rRNA and biotin-labeled 18S-26S rRNA gene probes, the fluorescence in situ hybridization patterns of autotetraploid plants were compared with the A. cyaneum wild type. The 5S rRNA gene sites were detected on the interstitial region in the short arm of chromosome 4 and on the interstitial region in both arms of chromosome 7. The 18S-26S rRNA gene sites were detected on the terminal region of the short arm, including the satellite of chromosome 5, as well as on a part of chromosome B. The chromosomal location of both rRNA genes in regenerated autotetraploid plants corresponded to those of the wild species.
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 44 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:153171 HCAPLUS Full-text
DOCUMENT NUMBER: 130:282405
TITLE: Kinetics of propylene polymerization initiated by rac-Me2Si(1-C5H2-2-Me-4-tBu)2Zr(NMe2)2/MAO catalyst
AUTHOR(S): ***Kim, Il***; Zhou, Jia-Min; Won, Mi-Sook
CORPORATE SOURCE: Department of Chemical Engineering, The University of Ulsan, Ulsan, 680-749, S. Korea
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1999), 37(6), 737-750
CODEN: JPACEC; ISSN: 0887-624X
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The kinetics of propylene polymerization initiated by ansa-metallocene diamide compound rac-Me2Si(CMB)2Zr(NM2)2 (rac-1, CMB = 1-C5H2-2-Me-4-tBu)/methyl aluminoxane (MAO) catalyst were investigated. The formation of cationic active species has been studied by the sequential NMR-scale reactions of rac-1 with MAO. The rac-1 is first transformed to rac-Me2Si(CMB)2ZrMe2 (rac-2) through the alkylation mainly by free AlMe3 contained in MAO. The methylzirconium cations are then formed by the reaction of rac-2 and MAO. Small amount of MAO ([Al]/[Zr] = 40) is enough to completely activate rac-1 to afford methylzirconium cations that can polymerize propylene. In the lab-scale polymns. carried out at 30°C in toluene, the rate of polymerization (Rp) shows maximum at [Al]/[Zr] = 6,250. The Rp increases as the polymerization temperature (Tp) increases in the range of Tp between 10 and 70°C and as the catalyst concentration increases in the range between 21.9 and 109.6 μM. The activation energies evaluated by simple kinetic scheme are 4.7 kcal/mol during the acceleration period of polymerization and 12.2 kcal/mol for an overall reaction. The introduction of addnl. free AlMe3 before activating rac-1 with MAO during polymerization deeply influences the polymerization behavior. The isotactic polypropylenes obtained at various conditions are characterized by

high m.p. (approx. 155°C), high ***stereoregularity*** (almost 100% [mmmm] pentad), low mol. weight (MW), and narrow mol. weight distribution (below 2.0). The fractionation results by various solvents show that isotactic polypropylenes produced at TP below 30°C are compositionally homogeneous, but those obtained at Tp above 40°C are separated into many fractions.

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 45 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:49265 HCAPLUS Full-text
DOCUMENT NUMBER: 130:168788
TITLE: High-yield polymerization process for stereospecific α-olefin polymers
INVENTOR(S): Roh, Ki-Soo; ***Kim, Il-Sup***; Yang, Choon-byung; Park, Yoon-Suk
PATENT ASSIGNEE(S): Samsung General Chemical Co., S. Korea
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 11012314	A2	19990119	JP 1998-126519		19980508
JP 2971440	B2	19991108			
US 6066702	A	20000523	US 1998-74079		19980507
PRIORITY APPLN. INFO.:			KR 1997-17650	A	19970508

AB The title process is characterized by (co)polymerizing α-olefins in the presence of catalysts comprising (a) solid complexes mainly prepared from (a1) Ti compds. containing Mg and halogens and (a2) internal electron donors, (b) Group I or III organometals, and (c) ≥3 organic Si compds. as external electron donors, where homopolymers prepared by the Si compds. in the same polymerization conditions satisfy melt flow rate (MFR) <5, 5-20, and ≥20, resp. Thus, propylene was polymerized using a catalyst comprising 0.02 mmol (calculated as Ti) solid component prepared from MgCl2, TiCl4, and monoethylene glycol dibenzoate, 10 mmol Al(Et)3, 0.1 mmol dicyclopentyldimethoxysilane, 0.8 mmol cyclohexylmethyldimethoxysilane, and 0.1 mmol vinyltriethoxysilane to give a polypropylene showing Mw/Mn 6.9, MFR 6.3 g/10 min, boiling-heptane extraction residue 98.0%, and polymerization activity 3.7 kg/g-h.

L37 ANSWER 46 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:645319 HCAPLUS Full-text
DOCUMENT NUMBER: 129:331088
TITLE: Syndioselective propylene polymerization: comparison of Me2C(Cp)(Flu)ZrMe2 with Et(Cp)(Flu)ZrMe2
AUTHOR(S): ***Kim, Il***; Kim, Ki-Tae; Lee, Min Hyung; Do, Youngkyu; Won, Mi-Sook
CORPORATE SOURCE: Department of Chemical Engineering, University of Ulsan, Ulsan, 680-749, S. Korea
SOURCE: Journal of Applied Polymer Science (1998), 70(5), 973-983
CODEN: JAPNAB; ISSN: 0021-8995
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The kinetics and stereochem. control of propylene polymerization initiated by syndiospecific isopropylidene(1-η5-cyclopentadienyl)(1-η5- fluorenyl)-dimethylzirconium-Me aluminoxane (I/MAO) and (1-fluorenyl-2-cyclopentadienylethane)-dimethylzirconium-MAO (II/MAO) were investigated. The influence of MAO concentration and polymerization temperature (Tp) on polymerization kinetics and polypropylene properties, such as mol. weight, mol. weight distribution (MWD), and stereoselectivity, have been studied in detail. The activity of both catalytic systems is very sensitive to the concentration of MAO. The I/MAO and II/MAO catalysts record maximum activity when [Al]/[Zr] ratio is around 1300 and 2500, resp. The activity and the degree of stereochem. control are also sensitive to Tp. The II/MAO catalyst is much more thermally stable than I/MAO catalyst; the former shows maximum activity at 80°C, whereas the latter shows maximum activity at 20°C. The cationic active species generated by II/MAO is not so stereorigid as those by I/MAO so that II/MAO catalyst produces sPP of broad MWD (4.43-6.38) and low syndiospecificity at high Tp. When Tp is above 50°C, II/MAO catalyst produces completely atactic polypropylene. The results of fractionation of sPP samples produced by I/MAO and II/MAO demonstrate that I/MAO catalyst is characterized by uniform active sites, but II/MAO is characterized by multiple active sites.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 47 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:323683 HCAPLUS Full-text
DOCUMENT NUMBER: 129:28517
TITLE: Thermal behavior of ***syndiotactic*** polypropylene/atactic polypropylene blends
AUTHOR(S): ***Kim, Il***; Lee, Sun Woo; Kim, Young Tae
CORPORATE SOURCE: Dep. Chem. Eng., Univ. Ulsan, Ulsan, 680-749, S. Korea
SOURCE: Polymer (Korea) (1998), 22(2), 240-250
CODEN: POLLDG; ISSN: 0379-153X
PUBLISHER: Polymer Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB Various ***syndiotactic*** polypropylene (sPP)/atactic polypropylene (aPP) blends (90/10, 80/20, and 60/40) were prepared by solution blending and were characterized by 13C-NMR, IR, x-ray diffraction, DSC, and TGA anal. The crystallinity of the blend decreases with increasing aPP content. Neat sPP and its blends show double melting peaks representing polymorphism. The number and the area ratio of each peak are dependent on thermal history of the sample. The equilibrium melting temperature of neat sPP is 152.6°, and those of the blends are 151.5, 150.8, and 147.5°, resp.

L37 ANSWER 48 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:271641 HCAPLUS Full-text
DOCUMENT NUMBER: 129:63794
TITLE: Cloning of the ribosomal protein L41 gene of Phaffia rhodozyma and its use as a drug resistance marker for transformation
AUTHOR(S): ***Kim, I. -G.***; Nam, S. -K.; Sohn, J. -H.; Rhee, S. -K.; An, G. -H.; ***Lee, S. -H.***; Choi, E. -S.
CORPORATE SOURCE: Applied Microbiology Research Division, Korea Research Institute of Bioscience and Biotechnology, Taejon, 305-600, S. Korea
SOURCE: Applied and Environmental Microbiology (1998), 64(5), 1947-1949
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ribosomal protein L41 gene of Phaffia rhodozyma was cloned and used as a dominant selectable marker for cycloheximide resistance in the transformation of P. rhodozyma. Electrotransformation with a plasmid containing a ribosomal DNA fragment as a targeting signal typically yielded 800 to 1,200 transformants/µg of DNA with an integrated copy number of about seven per haploid genome.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 49 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:263471 HCAPLUS Full-text
DOCUMENT NUMBER: 128:322006
TITLE: Copolymerization of propene and 1-hexene with isospecific and syndiospecific metallocene catalysts
AUTHOR(S): ***Kim, Il***; Kim, Young Jae
CORPORATE SOURCE: Department Chemical Engineering, University Ulsan, Ulsan, 680, S. Korea
SOURCE: Polymer Bulletin (Berlin) (1998), 40(4-5), 415-421 CODEN: POBUDR; ISSN: 0170-0839
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Copolymn. of propene and 1-hexene was carried out in toluene at 30° in the presence of homogeneous methylaluminoxane (MAO)-activated 3 ansa-metallocenes, highly syndiospecific iPr(Cp)(Flu)ZrMe2 (I), lower syndiospecific Et(Cp)(Flu)ZrMe2 (II), and isospecific rac-(EBTHI)ZrMe2 (III), in order to study the role of catalyst stereospecificity on comonomer incorporation. The incorporation of 1-hexene decreases in the following order: I/MAO > II/MAO > III/MAO catalyst. All copolymer chains contain the comonomer in nearly random distribution. The copolymers produced by I/MAO and III/MAO catalysts were composed of uniform chains, but that by II/MAO was fractionated into many fractions in the solvent extraction Considerable rate enhancements were recorded in the copolymn. when the feed ratio of 1-hexene to propene is ≈0.6 for all catalysts.

L37 ANSWER 50 OF 50 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:720631 HCAPLUS Full-text
DOCUMENT NUMBER: 126:13899
TITLE: Nuclear magnetic resonance in a metal cylinder using an RF eddy current
AUTHOR(S): ***Lee, S-H.; Kim, I-K.***
CORPORATE SOURCE: Department Physics, Yonsei University, Seoul, 120-749, S. Korea
SOURCE: Journal of the Korean Physical Society (1996), 29(4), 511-514 CODEN: JKPSDV; ISSN: 0374-4884
PUBLISHER: Korean Physical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors report a new NMR probe for use inside a metal cylinder. This probe uses the radiofrequency field from the eddy current. The eddy current, due to an radiofrequency solenoid in a uniform conducting cylinder, flows on the inside surface of the cylinder and generates a homogeneous radiofrequency field that fills a maximum volume in the cylinder. The authors obtained an radiofrequency field homogeneity ΔH1H1 of .apprx.0.025. The characteristics of the induced eddy current and its radiofrequency field inside a metal

cylinder were analyzed. Also, if the solenoid diameter is 0.707 of the cylinder diameter, the superposition of the radiofrequency fields from the solenoid and from the eddy current results in a homogeneous field everywhere. This allows NMR expts. with samples occupying space both outside and inside the solenoid.